Terra Bella Expressway

Tulare County, California
District 6-TUL-65 KP 0.0/29.0 (PM 0.0/18.0)
06-434000

Draft Environmental Impact Report/ Environmental Assessment

Prepared by the

U.S. Department of Transportation
Federal Highway Administration
and the
State of California, Department of Transportation

January 2005

General Information About This Document

What's in this document:

The Department of Transportation (Caltrans) and the Federal Highway Administration have prepared this Draft Environmental Impact Report/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Tulare County, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, the potential impacts from each of the alternatives, and the proposed avoidance, minimization and/or mitigation measures.

What you should do:

- Please read this Draft Environmental Impact Report/Environmental Assessment. Additional copies of this document as well as the technical studies are available for review at: California Department of Transportation, 1352 W. Olive Avenue, Fresno, CA; Tulare County Library at 200 W. Oak Avenue, Visalia, CA; and Porterville Public Library at 41 W. Thurman Avenue, Porterville, CA.
- We welcome your comments. If you have any concerns regarding the proposed project, please attend the Public Information Hearing and/or send your written comments to Caltrans by the deadline. Submit comments via postal mail to:

  Vickie Traxler, Environmental Branch Chief
  Attention: Juergen Vespermann
  Department of Transportation, Environmental Planning
  2015 E. Shields Avenue, Suite 100
  Fresno, CA 93726-5308

  Submit comments via email to: Vickie_Traxler@dot.ca.gov.

- Submit comments by the deadline: **April 15, 2005**

What happens next:

After comments are received from the public and reviewing agencies, the Department of Transportation and the Federal Highway Administration may: (1) give environmental approval to the proposed project, (2) undertake additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, the Department of Transportation could design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to California Department of Transportation, Attn: Vickie Traxler, San Joaquin Valley Analysis Branch, 2015 E. Shields Avenue, Suite 100, Fresno, California 93726-5308, (559) 243-8294 Voice, or use the California Relay Service TTY number, 1-800-735-2929.

SCH# 2004041130
06-TUL-65 KP 0.0/29.0
(PM 0.0/18.0))
06-434000]

Widen State Route 65 from a two-lane to four-lane expressway in Tulare County from the Kern County Line to 0.2 kilometers (0.1 mile) south of the State Route 190/65 Interchange in the city of Porterville

Draft Environmental Impact Report/Environmental Assessment

Submitted Pursuant to: (State) Division 13, Public Resources Code
(Federal) 42 USC 4332(2)(C)

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
and
THE STATE OF CALIFORNIA
Department of Transportation

8/9/04
Date of Approval

for Carrie L. Bowen
Chief
Central Region Environmental Division
California Department of Transportation

9/1/04
Date of Approval

For Gene K. Fong
Division Administrator
Federal Highway Administration

Summary

The California Department of Transportation (Caltrans) and the Federal Highway Administration propose widening a 29-kilometer-long (18-mile-long) segment of State Route 65 in Tulare County. The project would widen State Route 65 from kilometer post 0.0 (post mile 0.0) at the Kern County line to kilometer post 29.0 (post mile 18.0) about 0.2 kilometer (0.1 mile) south of the State Route 65 and State Route 190 Interchange from a two-lane to a four-lane expressway. In addition, the following improvements would be included: an 18.6-meter-wide (61-foot-wide) median; intersection improvements; minor highway realignment; bridge modifications and construction at Deer Creek and White River; utility relocation; right-of-way acquisition; shoulder widening; asphalt-concrete overlay; culverts; and guardrails.

The purpose for widening State Route 65 is to reduce traffic congestion by improving the level of service and safety. The present two-lane expressway within the project limits has a level of service "D" (minimal delays). Without the project, the projected level of service would be "E/F" (congested conditions and delays) by the year 2007 and level of service "F" (heavily congested with considerable delays) by the year 2027. The 20-year forecast for average daily traffic south of the city of Porterville shows a 134 percent increase, from 16,300 vehicles to 37,500 vehicles. In addition, eight of the 11 intersections within the project are currently experiencing accident rates equal to or higher than the state highway average.

The proposed project would provide a continuous four-lane expressway from the Tulare and Kern county line into Porterville. Another improvement within the project limits would widen Scranton Avenue east of State Route 65 where trucks need improved access to Wal-Mart's valley distribution center and where 90 lots are planned for two housing projects.

The Terra Bella Expressway Project is programmed in the 2002 State Transportation Improvement Plan, the 2002 Federal Transportation Improvement Program, and the Tulare County 2001/2002 Regional Transportation Plan as a constrained capacity-increasing project. The 2011 funding would come from the Regional Improvement Program (Lane Addition Program), the Transportation Congestion Relief Program, and the federal government (State Route 65 is a National Highway System Route.). Approval of the draft project report also allows the project to be eligible for State Transportation Improvement Program funding to cover costs for plans, specifications, and estimate support and the project approval and environmental document.

Environmental analysis considered the following project alternatives:

Recommended Build Alternative: Four-Lane Widening. From kilometer post 0.0 (post mile 0.0) at the Kern and Tulare county line, the project proposes widening State Route 65 from a two-lane to a four-lane expressway, with standard width median and shoulders, to kilometer post 29.0 (post mile 18.0) in the city of Porterville, Tulare County. The alignment is based on engineering and environmental constraints and minimizes the need for right-of-way acquisition. Design options were studied and incorporated into the build alternative to minimize costs and environmental impacts.

The existing roadbed would be rehabilitated with asphalt-concrete overlay and 3.0-meter-wide (10-foot-wide) outside shoulders. Existing intersections within the project limits would be upgraded to current design standards with signals and left-turn pockets provided at Avenues 56, 95, 128 (Teapot Dome), and 136 (Scranton Avenue). Left-turn lanes would be provided at 11 intersections. White River Bridge #46-0210 and Deer Creek Bridge #46-0213 would each receive an adjacent bridge, possible lengthening of the existing bridge, and some stream-channel modifications.

No-Build Alternative. The no-build alternative would keep the existing highway as it is. No improvements would be built to bring the roadway to current design standards, and no measures would be taken to improve the safety concerns or reduce the increasing congestion. Motorists' frustrations associated with conflicts arising from vehicles passing into the opposing lanes would continue to exist, as would the increased potential for head-on collisions as vehicle numbers rise.

Other alternatives considered include east, west, and symmetric alignments. Design options were also analyzed in the September 2002 Preliminary Value Analysis Report for the southern 11 kilometers (6.8 miles) of the project. These options include construction of passing lanes with full median, rumble strips on shoulders, improved sight distance at Orris Underpass, and construction of left-turn lanes. The preceding build alternative includes portions of the east, west, and symmetric alignments and the design options.

The summary of potential impacts for the build and no build alternatives is provided in the following table:

Summary of Potential Impacts for the Alternatives

Potential Impact			Build Alternative	No Build Alternative
Human Environment	Land Use		No zoning changes; agrees with city and county plans	No change
	Growth		Transportation corridor improvements to match predicted traffic/population increases	No highway improvements; additional delays and decreased highway safety
	Farmlands/Agricultural Lands		Acquisition of 70 hectares (174 acres) of farmland for highway expansion, including 51.4 hectares (127 acres) of Williamson Act land	No change
	Community	Relocations	Relocation of one farmhouse, access and parking changes to two businesses; relocation of six ornamental windmills and two large outdoor advertising signs	None
		Community Character and Cohesion	Community character and cohesion retained; enhanced travel between communities, schools, and work sites	Community character and cohesion retained; travel deterioration, over time, between communities, schools, and work sites
		Environmental Justice	None	No change
	Utilities/Emergency Services		Relocation of some utilities; emergency vehicles given priority during construction	No utility relocation; no change in emergency vehicle travel
	Traffic and Transportation/ Pedestrian and Bicycle Facilities		Bicycles on wider (3-meter/10-foot) highway shoulders	Bicycles on narrower shoulders
	Visual/Aesthetics		Construction replacement plantings	No change

Potential Impact		Build Alternative	No Build Alternative
Physical Environment	Hydrology and Floodplain	Two bridges lengthened; new bridges built at White River and Deer Creek; stream channel modification at Deer Creek; culverts installed	No change
	Water Quality and Storm Water Run-Off	Minor short- and long-term impacts to water quality during construction to be minimized using Best Management Practices and storm water improvements	No storm water improvements
	Geology/Soils/Seismic/ Topography	Additional highway cuts and fills	No change
	Paleontology	Paleontological monitoring during road construction	No change
	Air Quality	Fewer traffic delays to offset additional traffic over time	Over time, additional traffic and traffic delays; with additional starts and stops, would negatively affect air quality
	Noise	Construction of one noise barrier at a private recreational vehicle park	No noise barriers to be built
Biological Environment	Wetlands and Other Waters of the United States	0.0029 hectare (0.006 acre) permanent and 0.4 hectare (1.0 acre) temporary impact to Waters of the U.S.	No change
	Wildlife	185 hectare (458 acre) land acquisition for kit fox foraging habitat; mitigation for 12 elderberry shrubs; 0.3 hectare (0.7 acre) of marginal vernal pool fairy shrimp habitat	No change
	Threatened and Endangered Species	Kit fox, elderberry longhorn beetle, and fairy shrimp mitigation	No mitigation
	Invasive Species	Yellow star-thistle and bull nettle removal for construction activities	No yellow star-thistle or bull nettle removal
Cumulative Impacts		None	None

Anticipated Permits

Potential Impact	Permit Anticipated	Issuing Agency
Waters of the U.S.	Clean Water Act Section 404 Nationwide Permit 14*	U.S. Army Corps of Engineers
Water Quality	Clean Water Act Section 401 Water Quality Certification	California Regional Water Quality Control Board
Water Quality	Notice of Intent	California Water Resources Control Board
Streambed Alteration	Streambed Alteration Agreement pursuant to the California Department of Fish and Game code 1600 et. sec.	California Department of Fish and Game
Vernal pool fairy shrimp, San Joaquin kit fox, and valley elderberry longhorn beetle	Endangered Species Act Section 7 Biological Opinion	U.S. Fish and Wildlife Service

**Pending concurrence from the U.S. Army Corps of Engineers*

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) and the Federal Highway Administration propose to widen 29 kilometers (18 miles) of State Route 65 from a two-lane expressway to a four-lane expressway within Tulare County (see Figure 1-1). The project would start at the kilometer post 0.0 (post mile 0.0), the Kern and Tulare county line, and end at kilometer post 29.0 (post mile 18.0) in the city of Porterville. The proposed project would also include intersection improvements; minor highway realignment; bridge construction and modification at White River and Deer Creek; utility relocation; right-of-way acquisition; shoulder widening with rumble strips; asphalt-concrete overlay; culverts; and guardrails.

The existing two-lane expressway would transition into the proposed four-lane expressway at the Kern and Tulare county line and end joining the four-lane freeway in Porterville. The project area includes 11 public road intersections and three bridges (see Figure 1-2).

This project is included in the financially constrained 2004 Federal Transportation Improvement Program and the 2004 State Transportation Improvement Program. The proposed project is also included in the Tulare County 2004/2005 Regional Transportation Plan, which proposes funding for Phase 3 in the year 2028. The Federal Transportation Improvement Program was adopted August 9, 2004.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is twofold:

- Increase the vehicular capacity of State Route 65 to meet the existing and projected traffic volumes.
- Improve the safety and operation of State Route 65.

1.2.2 Need

1.2.2.1 Congestion

This major north-south, interregional roadway between Bakersfield, Porterville, Visalia, and Sequoia and Kings Canyon National Parks is experiencing increased congestion from a mixture of commuter and recreational traffic, slow-moving farm equipment, and the commercial trucks that make up 9 to 30 percent of the traffic volume. Therefore, with the increasing numbers of automobiles and trucks, vehicle clustering is common as drivers have fewer opportunities to safely pass slower-moving traffic.

Traffic volume is defined through the use of the levels-of-service rating. A level of service describes the operating conditions a driver will experience while traveling a highway. This rating system ranges from A to F, with "A" being free flowing traffic and "F" being traffic with heavy congestion and considerable delays. Figure 1-3 illustrates the levels-of-service rankings for a two-lane highway.

The traffic volumes shown in Table 1.1 are the average 24-hour traffic volumes calculated for a year. These traffic volumes are predicted to increase between 2007 and 2027 as follows:

- 94 percent (9,500 to 18,400) from the Tulare-Kern county line to Avenue 56
- 134 percent (12,800 to 30,000) from Avenues 56 to 95
- 134 percent (16,000 to 37,500) from Avenue 95 to State Route 190

Based upon these projected traffic volumes within the proposed project limits, the current two-lane expressway is insufficient to manage future traffic volumes.

Table 1.1 Traffic Volumes and Levels of Service

Locations	Year		
	2007	2017	2027
County line to Avenue 56			
• Average daily traffic	9,500	13,200	18,400
• Level of service without the project	B (C)[1]	C (D)	D (D)
Avenue 56 to Avenue 95			
• Average daily traffic	12,800	19,500	30,000
• Level of service without the project	C (D)	D (E)	E (E)
Avenue 95 to State Route 190			
• Average daily traffic	16,000	24,500	37,500
• Level of service without the project	D (E)	E (E)	E (F)

1 = morning and afternoon peak hour level-of-service rankings

The desired level of service for State Route 65 is "C" because it is a regionally significant route on the interregional road system and has a federal functional classification as a principal arterial (Transportation Concept Report 2002). The current level of service "D" is deficient for this type of highway. Traffic projections indicate that the level of service will deteriorate to "E" and "F" without improvements during the planning years of 2007 to 2027.

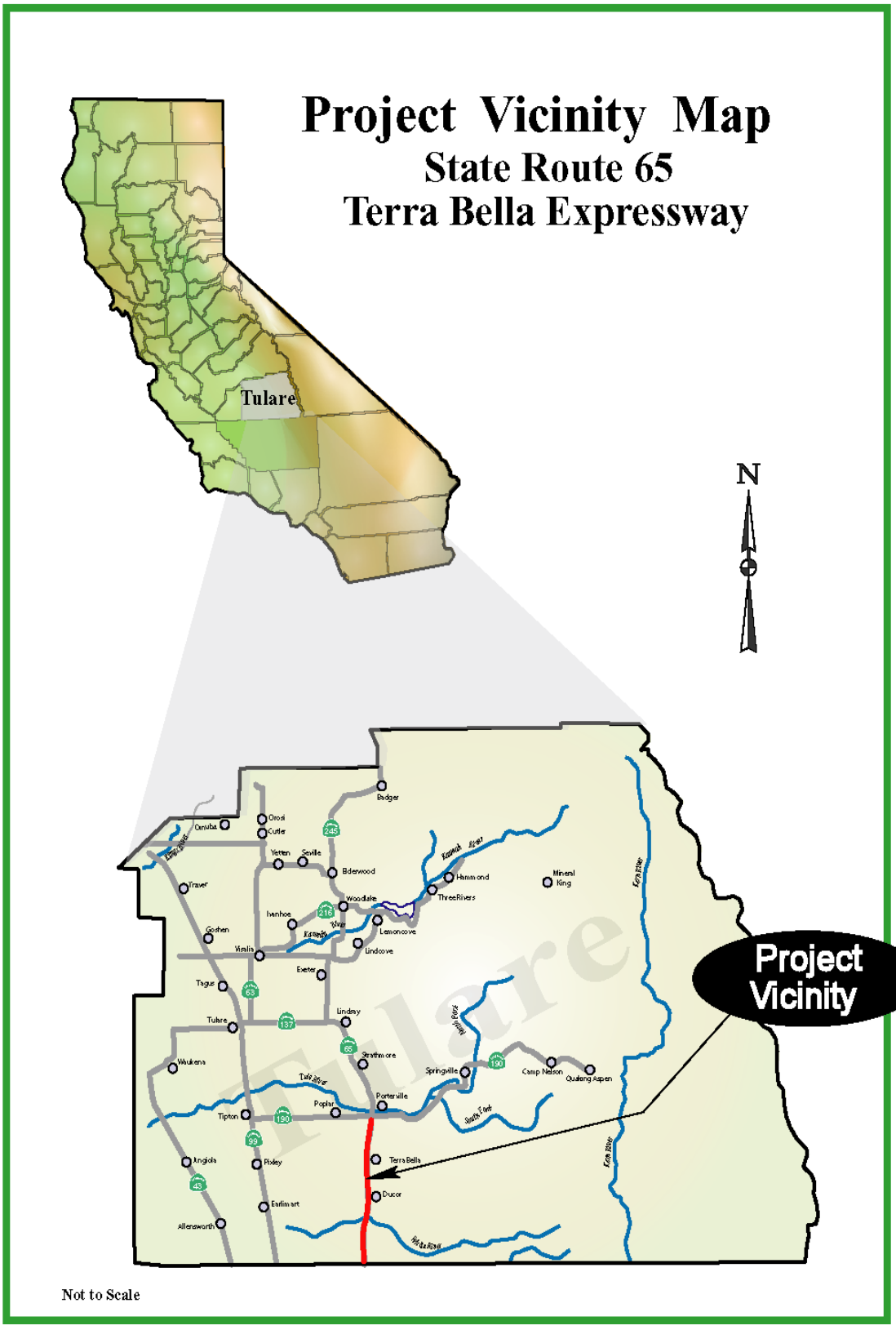


Figure 1-1 Project Vicinity Map

Project Location Map
Terra Bella Expressway

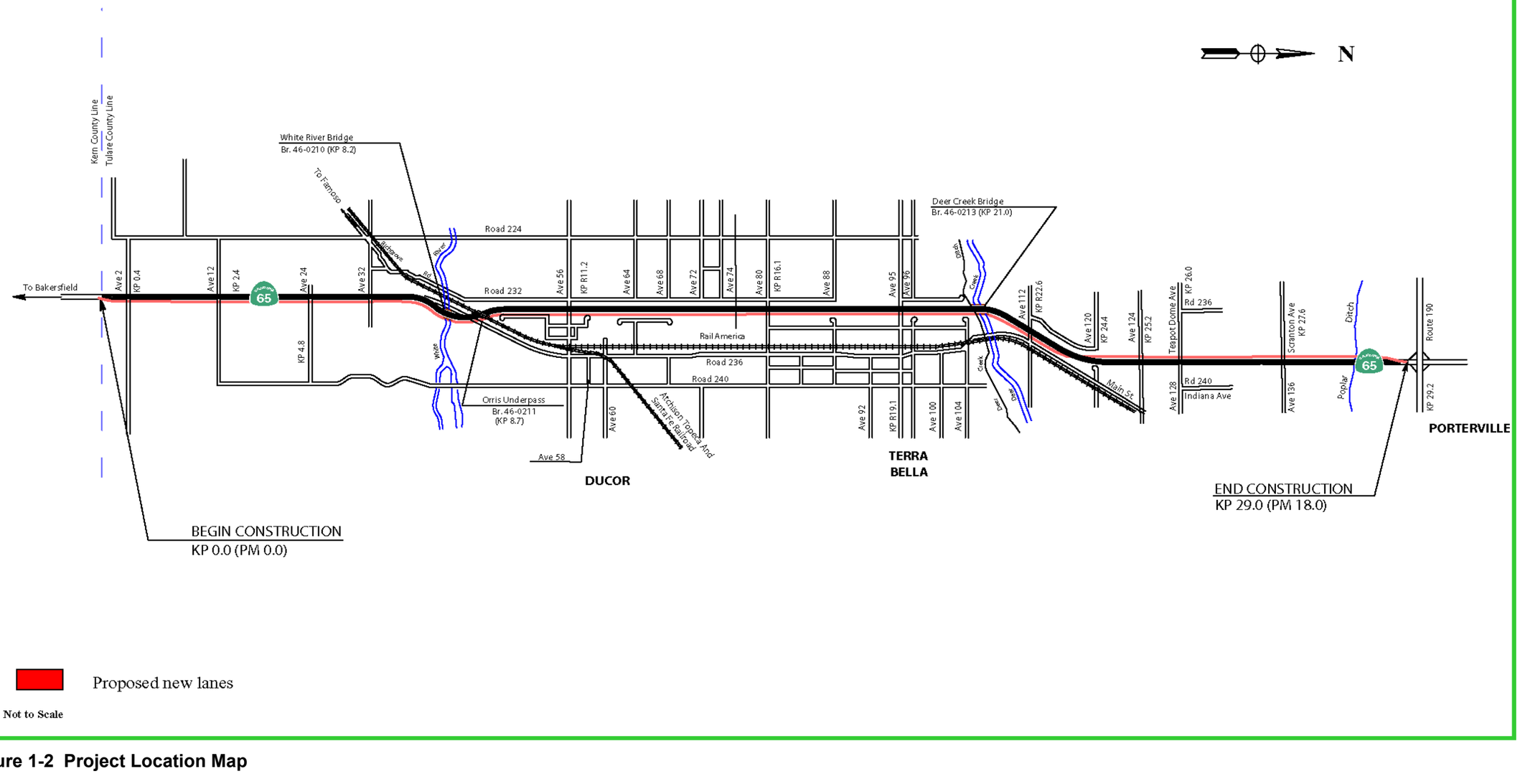
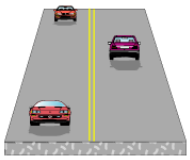
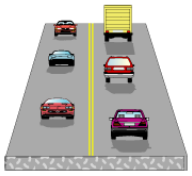
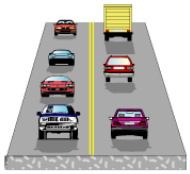


Figure 1-2 Project Location Map

LEVELS OF SERVICE

for Two-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		55+	Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. **No delays**
B		50	Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. **No delays**
C		45	Stable traffic flow, but less freedom to select speed, change lanes or pass. **Minimal delays**
D		40	Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. **Minimal delays**
E		35	Unstable traffic flow. Speeds change quickly and maneuverability is low. **Significant delays**
F			Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. **Considerable delays**

Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways in Class 1

Figure 1-3 Levels of Service for Two-Lane Highways

1.2.2.2 Safety

Between April 1, 2000 and March 31, 2003, the accident rate for the State Route 65 section under study was below the statewide accident rate for similar highways (see Table 1.2). During this time period, 62 accidents (three fatal, 19 injury, and 40 property damage) occurred within the project limits. Fatal accidents included one head-on, one overturn, and one involving a vehicle and a pedestrian. The type and number of collisions fall into the following categories: head-on (3); overturn (7); rear end (16); sideswipe (11); hit object (18); vehicle/pedestrian (1); broadside (1); and other (5). However, these accidents do not take accidents at the intersections within the project limits into account (see below).

Recently a passing-lane was built between the communities of Ducor and Terra Bella. Also, adequate sight distance and striping for passing is found elsewhere, but the high traffic volumes often prohibit drivers from passing. This project would separate the opposing travel lanes with a median to reduce head-on, sideswipe, and overturn accidents.

Intersection accident history for the same three-year period shows the actual total accident rate equal to or above the statewide average total accident rate at eight of the 11, or 73 percent, intersections: Avenues 2, 32, 56, 80, 95, 112, 128, and 136. The accident rates per million-vehicle-kilometers traveled are listed in Table 1.2. Without highway improvements, increased congestion and the potential for accidents would increase.

Table 1.2 Accident Data—4/1/00 to 3/31/03

Highway Segment	Actual[1]			Average[1]		
State Highway 65	**Fatal**	**Fatal + Injuries**	**Total**	**Fatal**	**Fatal + Injuries**	**Total**
Entire Project Length	0.014	0.17	0.40	0.022	0.22	0.44
Intersections						
Avenue 136/Scranton	0.000	0.15	**0.22**	0.002	0.09	0.22
Avenue 128/Teapot Dome	0.000	0.63	**0.98**	0.002	0.09	0.22
Avenue 124	0.000	0.00	0.00	0.004	0.10	0.22
Avenue 112	0.000	0.37	**0.60**	0.008	0.16	0.33
Avenue 95/Terra Bella/J24	0.000	0.15	**0.44**	0.008	0.16	0.33
Avenue 80	0.000	0.10	**0.40**	0.008	0.16	0.33
Avenue 56/Sierra/J22	0.000	0.27	**1.00**	0.008	0.16	0.33
Avenue 32	0.000	0.12	**0.35**	0.004	0.10	0.22
Avenue 24	0.000	0.12	0.12	0.008	0.16	0.33
Avenue 12	0.000	0.12	0.12	0.008	0.16	0.33
Avenue 2	0.000	0.35	**0.93**	0.008	0.16	0.33

= Accidents per million vehicle kilometers

1.3 Alternatives

Two build alternatives were considered during project development. The existing two-lane expressway was designed as one side of a four-lane divided expressway. Right-of-way and access rights for expansion of the highway were acquired as part of the original construction. However, because engineering standards have changed, additional right-of-way is now required to build a four-lane expressway.

A Major Investment Study (June 1999) with two supportive Porterville City Council public meetings and a Value Analysis (September 2002) helped define engineering and environmental constraints. Design options were incorporated to minimize costs and environmental impacts. Both build alternatives included a four-lane expressway with an 18.6-meter-wide (61-foot-wide) median.

1.3.1 Build Alternative

The build alternative under consideration begins at the Tulare and Kern county line, kilometer post 0.0 (post mile 0.0), and continues into the city of Porterville in Tulare County at kilometer post 29.0 (post mile 18.0). The project proposes widening a 29-kilometer (18-mile) segment of State Route 65 from a two-lane to a four-lane expressway with, at minimum, an 18.6-meter (61-foot) median, plus the following design features:

- Two additional lanes and a median with a minimum width of 18.6 meters (61 feet) to divide the two northbound and two southbound lanes.
- Left-turn lanes at Avenues 2, 12, 24, 32, 56, 80, 95, 112, 124, 128, and 136. Right-turn lanes on State Route 65 and left-turn lanes on local roads at Avenues 56 (Sierra), 95 (Terra Bella), 128 (Teapot Dome), and 136 (Scranton).
- New bridges approximately 18.6 meters (61 feet) upstream of the existing bridges at White River and Deer Creek to accommodate two additional travel lanes. The new bridges, approximately 11.7 meters (38 feet) wide, would be similar to the existing bridges. Bridge lengths would be about 80 meters (262 feet) at White River and 160 meters (525 feet) at Deer Creek.
- Existing White River Bridge (#46-0210) and Deer Creek Bridge (#46-0213) possibly lengthened to match the new bridges and correct streambed constrictions.
- Existing roadway rehabilitated with asphalt-concrete pavement.
- Relocation of three parallel county roads: Divizich Avenue, Norwood Road, and an unnamed road to the west between Avenue 112 and Avenue 120.
- Horizontal and vertical site distance improved at Orris Underpass.

- Existing bridge railings upgraded.
- Existing outside shoulders and rumble strips, widened to 3.0 meters (10 feet).
- Relocation of utilities within the proposed right-of-way.
- A permanent, changeable message sign and weather station at kilometer post 27.4 (post mile 17.0).
- Drainage ditches within the right-of-way that parallel the expressway.
- Fenced right-of-way boundaries as needed.
- Culverts and culvert-box replacement.

The majority of the highway widening would be east of the existing two-lane highway. Between Avenue 112 and Avenue 124, however, following state right-of-way, the expressway widening would transition to the west side of the existing highway before joining State Route 190 at the project terminus in Porterville (see Figure 1-2).

Typical cross-sections of the proposed expressway are illustrated in Figures 1-4a and 1-4b. A median to separate north- and southbound lanes and left-turn lanes at 11 public road intersections should reduce the potential of head-on and rear-end collisions, sideswipes, and broadsides.

With construction scheduled to begin in 2008, the estimated project cost for this alternative, including right-of-way acquisition and utilities relocation, is $69 million. The project, however, would be built in phases, as money becomes available:

- Phase 1—Porterville south to Terra Bella where traffic congestion is greatest.
- Phase 2—Terra Bella to Ducor
- Phase 3—Ducor to the Tulare and Kern county line.

1.3.2 No Build Alternative

The no-build alternative would not provide relief from existing road deficiencies. It would leave the roadway as it is. Increasing congestion would not be eliminated or the roadway brought to current design standards. The level of service would also continue to deteriorate as the number of vehicles and accidents increase. This alternative, therefore, does not meet the purpose and need for the project. However, funding would continue for minor projects for turn-lanes and passing-lanes in high-need areas.

The no-build alternative is included here to provide a basis against which the impacts of the build alternative are compared and to satisfy federal requirements for analyzing "no build" in Environmental Assessments (40 Code of Federal Regulations 1502.14).

1.3.3 Alternative Considered and Withdrawn

Initially, a second alternative was included (Project Study Report, March 2000). Except for the shorter length—kilometer post 11.2 (post mile 7.0) at Avenue 56/Ducor to kilometer post 27.7 (post mile 17.2) at Porterville—the second alternative was the same as the recommended build alternative. This second alternative, however, did not satisfy the purpose and need of the project. That is, it ended before the freeway widens to full median width within Porterville, and it did not extend south to include capacity, safety, and operational needs.

Design options for this second alternative above (Preliminary Value Analysis Report, September 2002) for kilometer posts 0.0/11.2 (post miles 0.0/7.0) included passing lanes, improving sight distance at the Orris/Railroad Underpass, constructing left-turn lanes at intersections, and installing rumble strips. The left-turn lanes and rumble strips are included in the recommended build alternative (see Section 1.3.1 above).

1.3.4 Transportation Systems Management

Transportation Systems Management considers operational improvements to satisfy the purpose and need of the project. The Transportation Systems Management process focuses on using the existing transportation systems and roadways more efficiently. Examples of the strategies include auxiliary lanes, turn lanes, reversible lanes, traffic signal coordination, ridesharing, and alternate modes of transportation.

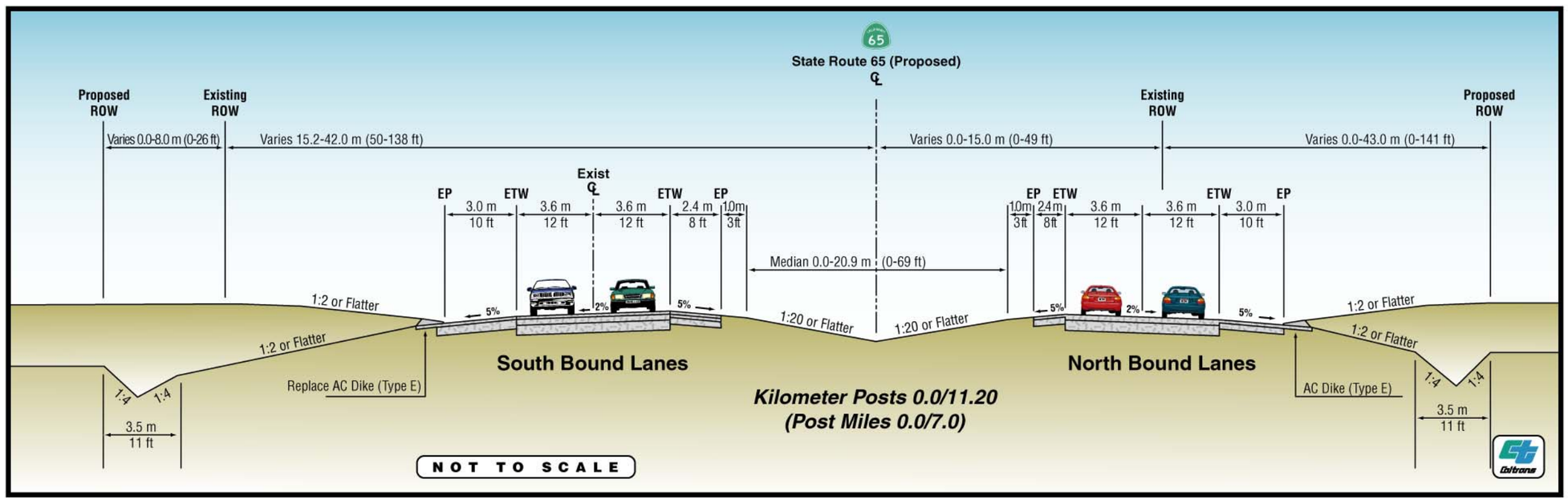
Strategies implemented on State Route 65 within the project area are intersection improvement projects at Avenue 136 (Scranton Avenue) and Avenue 128 (Teapot Dome Avenue) within the city of Porterville and passing lanes (north- and southbound) between Ducor and Terra Bella (kilometer posts 13.0/14.8, post miles 8.1/9.2). These highway modifications, however, do not provide enough capacity for the volume of vehicles using the road. Also, neither do Ducor and Terra Bella's low population densities support an expansion of the local public transit system (See 2.4 Cumulative Impacts in Chapter 2 for a discussion of individual projects for this portion of State Route 65.).

1.4 Permits and Approvals Needed

Table 1.3 shows the permits, review, and approvals required for project construction.

Table 1.3 Permits Needed

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Biological Opinion for Threatened and Endangered Species	Biological Assessment was submitted April 7, 2004.
United States Army Corps of Engineers	Section 404 Nationwide Permit 14 for filling or dredging waters of the United States	Application for Section 404 permit is anticipated after final environmental document distribution.
California Department of Fish and Game	Streambed Alteration Agreement pursuant to the California Department of Fish and Game code 1600 et. sec.	Application for permit to be submitted.
Regional Water Quality Control Board	Section 401 Certification for a Water Discharge Permit	Application for a Section 401 permit to be submitted.
California State Water Resources Control Board	Notice of Intent	Notice of Intent to be submitted.



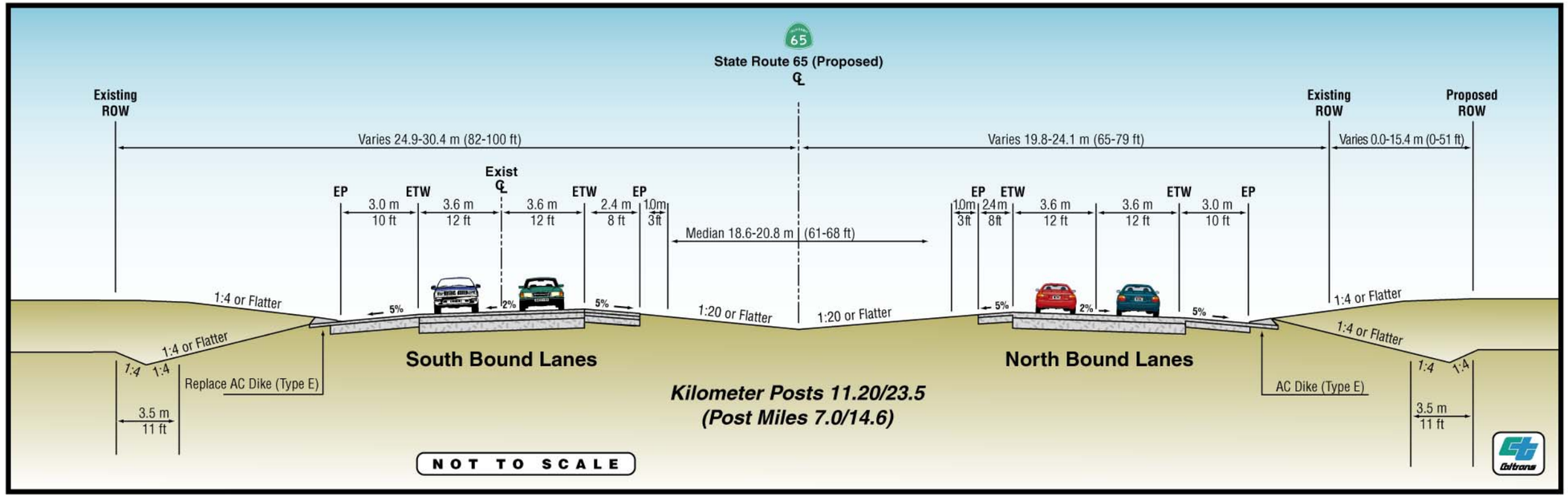


Figure 1-4a Typical Cross-Sections of the Proposed Four-Lane Expressway

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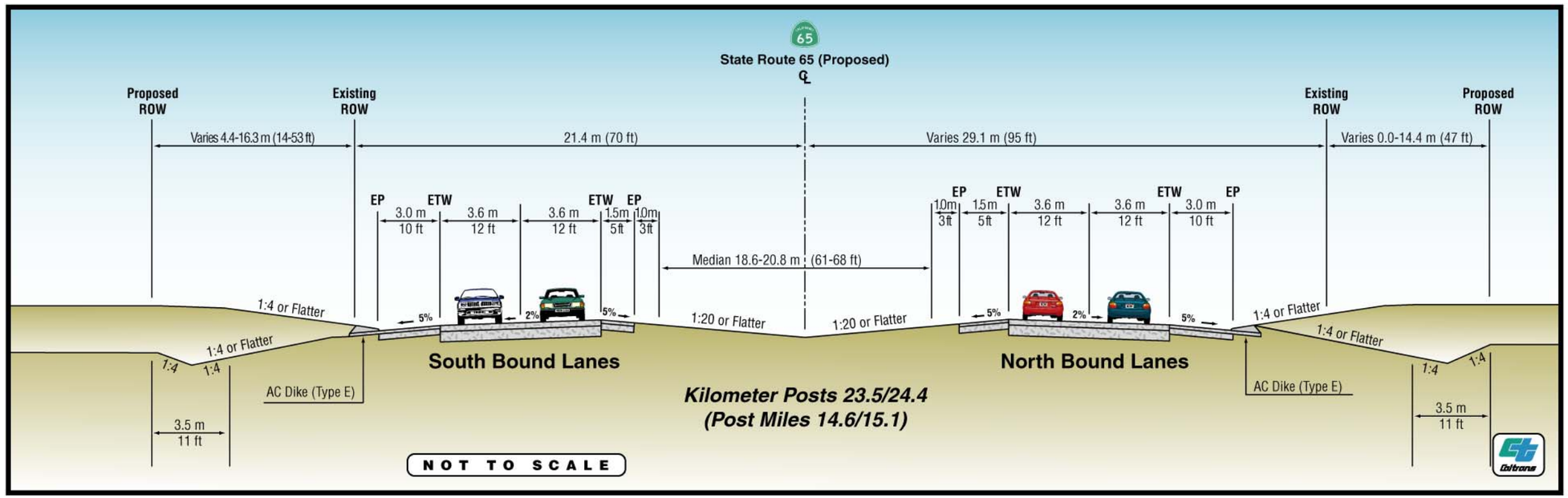


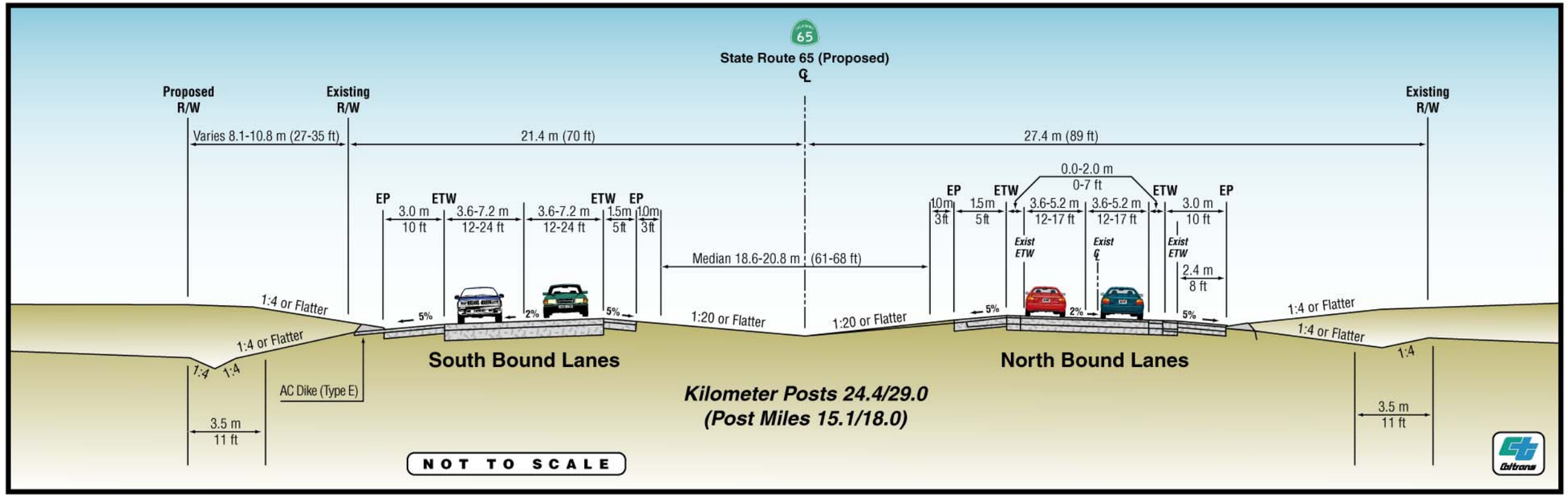


Figure 1-4b Typical Cross-Sections of the Proposed Four-Lane Expressway

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

This chapter describes how the project would affect the surrounding environment. It includes the regulatory setting, when applicable, the affected environment, the proposed project impacts, and measures proposed to avoid, minimize, or compensate/mitigate those effects.

As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered but no potential for adverse impacts to these resources were identified. Consequently, no further discussion regarding these resources is in this document.

- Cultural Resources—no historical properties or archaeological sites (Historic Property Survey Report); see the State Historic Preservation Officer's concurrence letter (Appendix C).
- Wild and scenic rivers—none
- Coastal barriers and coastal zone—none
- Public parks, recreational areas, and wildlife and waterfowl refuges—none
- Natural communities (biology) —none (Natural Environmental Study)
- Plants—Eleven regional special-status plant species are listed in Appendix I; however, these species are not addressed in this document because (1) no suitable habitat within the biological study area exists, (2) none of these species were observed during the botanical survey, and (3) no California Database occurrences for these species are within the biological study area.

Environmental impacts reported in this Draft Environmental Impact Report/ Environmental Assessment are based on technical studies conducted for this project. The studies are available for review at the Caltrans District 6 Office at 2015 E. Shields, Suite 100 in Fresno, CA 93726.

2.1 Human Environment

2.1.1 Land Use

2.1.1.1 Existing and Future Land Use

2.1.1.1.1 Affected Environment

Tulare County is the second-leading producer of agricultural commodities in the United States. Packing, shipping, and manufacturing aid the distribution of its plentiful crops. The dominant land use within the proposed project area is agriculture. Dryland farming is common in the south near the Kern county line, while orchards are common north of the White River.

Two communities, Terra Bella and Ducor, are located east of State Route 65 mid-way between the Tulare and Kern county line and the city of Porterville (Figure 1-2). Some residential, commercial, and light industrial use properties are present in and around these communities. Near Avenue 112, oil wells are on two land parcels adjacent to State Route 65. Also, two privately owned recreational vehicle parks are located between Terra Bella and Porterville. No public parks are present.

Zoning reflects the land uses described above. The southern city limit of Porterville begins at Avenue 128 (Teapot Dome Avenue) and follows the highway right-of-way north across Poplar Ditch. Urban residential lots are north of Poplar Ditch on both sides of the highway. South of Avenue 128, the land for much of the proposed project is zoned as rural agriculture, with a few scattered farmhouses and buildings present.

The City of Porterville is considering road improvements to widen Avenue 136 (Scranton Avenue) east of State Route 65 (see Figure 1-2) within its Urban Development Boundary for improved truck access to a large Wal-Mart distribution center.

2.1.1.1.2 Impacts

To construct the highway, strips of land adjacent to State Route 65 would be acquired from approximately 100 land parcels. One farmhouse and portions of two business parking lots would be displaced. No agricultural operations would be totally displaced, and the remaining agricultural land would not be impaired. The project would take only slivers of land from adjacent parcels, leaving land use patterns unchanged.

2.1.1.1.3 Compensation Measures

All land acquisitions are subject to the Uniform Relocation Act. Both Section 2.1.4.2 and Appendix E of this report discuss these acquisition and compensation measures.

2.1.1.2 Consistency with State, Regional, and Local Plans

2.1.1.2.1 Affected Environment

The Terra Bella/Ducor Community Plan (2003) is a component of the Land Use and Circulation Elements of the Tulare County General Plan. It identifies State Route 65 as a major arterial. The Porterville Circulation Element (July 1993) and Land Use, Open Space, Conservation and Safety Elements (July 1998) also designate the route as an expressway/freeway for regional travel and emergency evacuation. These approved county and local land use plans and circulation elements are supported by this project. This project is also included in the current Tulare Council of Governments' 2002 Regional Transportation Plan and Program, the 2002 State Transportation Improvement Program, and the Traffic Congestion Relief Program.

Both the circulation element of the Tulare County General Plan and the Regional Transportation Improvement Program prepared by the Tulare Council of Governments envision this portion of State Route 65 as a four-lane highway.

2.1.1.2.2 Impacts

The expansion of the highway would not affect existing land uses. The proposed project is consistent with local land use plans.

2.1.2 Growth

2.1.2.1 Regulatory Setting

The Council of Environmental Quality Regulations, which implements the 1969 National Environmental Policy Act, requires evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The Council of Environmental Quality Regulations, 40 Code of Federal Regulations 1508.8, refers to these consequences as secondary impacts. As elements of growth, secondary impacts may include changes in land use, economic vitality, and population density.

The California Environmental Quality Act also requires the analysis of a project's potential to induce growth. California Environmental Quality Act Guidelines, Section

15126.2(d), require that environmental documents "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…."

2.1.2.2 Affected Environment

Historically, the communities of Terra Bella and Ducor were centered on the railroad and Road 236 east of State Route 65. In the 2003 Terra Bella/Ducor Community Plan, the urban development boundary was expanded outward in a concentric circle from these historic centers to include two State Route 65 intersections at Avenues 56 and 95.

The city of Porterville's beginning is also based on the railroad and Road 236, or Main Street. Today, Porterville's center is north of State Route 190 and the State Route 65 intersection where this proposed project ends. Planned growth for Porterville is basically north of State Route 190. South of State Route 190, Porterville's urban area boundary includes the airport, land zoned for agriculture, State Route 65, and some parcels east of State Route 65.

The annual population growth rates, based on the 1990 to 2000 U.S. Census data, average 2.5 percent for Tulare County, 2.5 percent for Porterville, 2.4 percent for Terra Bella, and 4.4 percent for Ducor. Table 2.1 gives the current and projected population figures based upon historical growth patterns.

Table 2.1 Population and Growth Rates

Community	Porterville	Terra Bella	Ducor
Population 1990	29,660	2,740	332
Population 2000	39,615	3,466	504
Projected Population 2020	64,903	5,559	1,179
Growth Rate 1990 to 2000	2.5%	2.4%	4.4%

In addition to the census data for these communities, there also is a seasonal migration of farm workers. In the harvest season, Terra Bella and Ducor may include an additional 1,000 people (Terra Bella/Ducor Community Plan, 2003).

Approximately half of the landowners with land along State Route 65 live in Porterville, Terra Bella, or Ducor. This highway serves as a vital transportation corridor for the landowners and farm workers, their farm equipment, and harvested crops.

Employment opportunities for Ducor residents include agriculture and two rock quarries east of town. Employment in Terra Bella includes agriculture, a pistachio nut

processing plant, and a large lumber company that processes logs from the Sierra Nevada Mountains east of town. In Porterville, there is additional business diversification that aids the area's prosperity. For example, Wal-Mart supplies the San Joaquin Valley from a large distribution center located south of State Route 190 and 1.2 kilometers (0.75 mile) east of State Route 65.

2.1.2.3 Impacts

The proposed transportation improvements would accommodate planned and existing growth rates in the study area. Planned Porterville expansion is north of the Tule River beyond the end of this project. The communities of Ducor and Terra Bella have their planned growth extending outward in all directions from the historic town centers east of this highway. Their urban development boundaries include several land parcels immediately west of State Route 65 at Avenues 56 and 95.

A Growth Inducement Checklist (Caltrans Environmental Handbook, Volume 4, 1997) was used to analyze the proposed project for growth inducement. The relationship between the proposed project and growth in the area is expected to be one of accommodating planned growth rather than one of growth inducement. Recently established urban development boundaries (Terra Bella/Ducor Community Plan, 2003) and the Rural Valley Lands Plan (Tulare County General Plan Amendment 94-008, 1995) help to limit urban expansion, discourage unplanned growth, and preserve agricultural land. Local development, in conformance with existing city and county plans, can be expected to occur in the general study area, particularly in areas designed for future urbanization. The local population growth tends to be market driven. That is, people move into the area for jobs and affordable housing.

With this project the average commute time from Bakersfield to Porterville would be reduced by less than 5 minutes. Most of the local traffic within Tulare County is between the towns of Ducor or Terra Bella and Porterville, where four traffic signals affect the overall speed. The four-lane corridor would aid the distribution of locally grown commodities and encourage trade between Porterville and Bakersfield.

2.1.3 Farmlands/Agricultural Lands

2.1.3.1 Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (*Title 7* United States Code 4201, et seq. and its regulations, *Title 7* Code of Federal Regulations Chapter VI Part 658) require federal agencies, such as the Federal

Highway Administration, to coordinate with the Natural Resources Conservation Service if the federal agency's activities may irreversibly convert farmland (directly or indirectly) to non-agricultural use. For purposes of the Farmland Protection Policy Act, the term "farmland" includes prime farmland, unique farmland, and land of statewide or local importance. The farmland, however, does not currently have to be under cultivation or producing a crop. That is, the land can be forestland, pastureland, cropland, or other land, but not water or developed urban land.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land, and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural- and open-space lands to other uses.

Farmland impacts for highway projects are determined through the use of the Farmland Conversion Impact Rating Form AD 1006 from the Natural Resources Conservation Service. Points are assessed based on the type of farmland to be converted to non-agricultural use and specific site assessment criteria. Affected lands with a score of 160 or greater are considered to have a high potential for receiving impacts and are suitable for protection under the Farmland Protection Policy Act.

The California Department of Conservation's Farmland Mapping and Monitoring Programs indicate the proposed project area includes prime farmland and farmland of statewide and local importance. "Prime farmland" has the best combination of physical and chemical characteristics for crop production. "Farmland of statewide importance" has intermediate combinations of physical and chemical characteristics for the production of crops. "Farmland of local importance" is land, as the name implies, important to the local economy as defined by each county's local advisory committee and adopted by its board of supervisors.

Tulare County places an emphasis on agriculture in two elements of its General Plan: Urban Development Boundaries and Rural Valley Lands Plan. These elements help preserve agricultural land, limit urban expansion, and discourage unplanned growth. In addition, there is the Williamson Act Agricultural Preserve Program and a countywide right-to-farm ordinance that contributes to agricultural preservation and protection.

2.1.3.2 Affected Environment

Generally the soils along the project portion of State Route 65 have poor drainage, a condition that affects the following types and percentages of farmland adjacent to the route:

- Farmland of local importance—47 percent
- Farmland of statewide importance—42 percent
- Grazing and other lands—9 percent
- Prime farmland—2 percent

Most of the agricultural land located south of Ducor is under the Williamson Act. Large land parcels of 40.5 to 162 hectares (100 to 400 acres) devoted to dryland farming are common. Hay and grain are the major crops grown on this rolling terrain, although some citrus is also present.

North of White River, the major crops in this flatter terrain are citrus, olive, pistachio, grape, hay, and grain, with orchards being the most common. Maps in Appendix D illustrate the types of farmland and which parcels are under Williamson Act jurisdiction. The table in Appendix D gives information on each of 86 farmland parcels that would be affected by this project. The Farmland Conversion Impact Rating Form AD 1006 reflects highway-widening changes to the adjacent farmland parcels.

2.1.3.3 Impacts

Up to 70 hectares (174 acres) of farmland, in the form of slivers of land, would be converted to highway use. This includes 4.5 hectares (11 acres) of prime farmland and 65 hectares (160 acres) classified as statewide and locally important farmland. The total for converted farmland is less than 0.000232 percent of Tulare County's prime farmland.

The project's build alternative would convert 45 slivers of Williamson Act farmland along the current State Route 65 alignment. The total Williamson Act farmland from these parcels would be 51.4 hectares (127 acres), although none of these parcels would be bisected, and no Williamson Act contracts would be cancelled.

The Farmland Conversion Impact Rating (Appendix D) is 121 points for the build alternative. Because the Farmland Conversion Impact Rating for the proposed project falls below the 160-point threshold, protection under the Farmland Protection Policy

Act would not be required. The impact to prime and other farmland, therefore, is less than significant (see Appendix D).

2.1.3.4 Avoidance, Minimization, and Mitigation Measures

All land acquisition for this project is subject to the Uniform Relocation Act. See section 2.1.4.2 and Appendix E for a discussion of acquisition impacts and mitigation measures.

2.1.4 Community Impacts

2.1.4.1 Community Character and Cohesion

2.1.4.1.1 Regulatory Setting

The National Environmental Policy Act of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. The Federal Highway Administration, in its implementation of the National Environmental Policy Act [23 U.S.C. 109(h)], directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. If, however, a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.1.4.1.2 Affected Environment

Human population is sparse south of the city of Porterville. Scattered farmhouses occur on agricultural lots adjacent the 29-kilometer (18-mile) highway corridor. Most people who own land adjacent to the highway live in Porterville, Terra Bella, or Ducor. Both Terra Bella and Ducor are east of State Route 65.

The city of Porterville (population 39,615) is the center of a large farming area noted for citrus and livestock. Industry is becoming a significant factor in the development of the community. Large companies such as Wal-Mart, National Vitamin, Beckman Instruments, Pro-Forms and Royalty Carpeting have facilities here. Public facilities

include the Porterville Developmental Center, Sequoia National Forest Headquarters, the Army Corps of Engineers Lake Success Facility, and the Porterville College campus of the Kern Community College District. The city has a small airport west of State Route 65 between Avenues 128 (Teapot Dome) and 136 (Scranton Avenue). Porterville's high school and community college also serve Terra Bella and Ducor students.

Ducor is an agriculturally based town with a population of 504 people (2000 Census). The town of Terra Bella (population 3,466), though also agriculturally based, is able to provide additional employment opportunities with a pistachio nut processing plant and a large lumberyard. Both communities support kindergarten-through-eighth-grade schools.

2.1.4.1.3 Impacts

The highway project would improve movement of vehicles between the two smaller communities of Ducor and Terra Bella and the city of Porterville for activities such as shopping, produce deliveries, recreation, high school and college education, and emergencies. It would also facilitate transportation of goods between counties and aid the export of farm produce to markets.

2.1.4.2 Relocations

2.1.4.2.1 Regulatory Setting

Caltrans Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations Part 24. The purpose of the Caltrans Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix E for a summary of the Relocation Assistance Program. All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S.C. 2000d, et seq.). Please see Appendix B for a copy of Caltrans' Title VI Policy Statement.

2.1.4.2.2 Affected Environment

Most of the land adjacent to the highway is used to grow crops. Agricultural-related businesses along the highway include hay storage, citrus marketplaces, and the storage and maintenance of helicopter, farm, and truck equipment. A few residences,

businesses, and two private recreational-vehicle parks are located between Terra Bella and Porterville.

The existing highway right-of-way between the Kern and Tulare county line and Porterville varies from 33.5 to 65.8 meters (110 to 216 feet). The right-of-way needed to expand the 2-lane expressway into four-lane expressway averages 59.1 meters (194 feet), excluding intersections and highway cuts and fills.

2.1.4.2.3 Impacts

One single-family residence at 1310 State Route 65 would be acquired. A second single-family residence at 23245 Avenue 96 might be affected. On three parcels, slivers of land would be purchased that could affect four businesses, including relocation of frontal access and a portion of two parking lots (see Table 2.2).

Table 2.2 Potential Relocations

	Assessor Parcel Number	Address	Use of Parcel	Type of Acquisition	Comments
Residential	339-140-009	1310 State Route 65	Single-family residence + pasture	Structure/ Partial	Single family residence acquisition
	320-351-028	23245 Avenue 96	Single-family residence	Partial	Possibly land only
Business	320-110-069	23297 88th Avenue	Two businesses—Kern Truck and Trailer; and Highway 65 Diesel	Partial	Land only
	268-130-023	1018 Teapot Dome Avenue	Business—Pearson Ranch Industrial Park	Partial	Frontal access, some parking, and six large ornamental windmills
	268-130-024	No address	Business—Corkins Inc. Spray Machines Division	Partial	Frontal access and some parking

2.1.4.2.4 Relocation Measures

Based on an 8 percent single-family residential vacancy rate for Tulare County, sufficient single-family residences equal to or better than the displaced properties will be available for rent or purchase. Also, based on an 11 percent vacancy rate for commercial properties in the county, sufficient commercial properties are available to which any business that is directly affected by this project could relocate. The

industrial park would not be a full acquisition, although the parking lot would be re-configured and the ornamental windmills would be moved. Also, two large Outdoor Advertising Signs would need to be purchased south of Avenue 95 (Draft Relocation Impact Memorandum, dated January 15, 2004).

Any person (individual, family, corporation, partnership, or association) who moves from real property or moves personal property from real property as a result of the acquisition of the real property, or is required to relocate as a result of a written notice from the California Department of Transportation from the real property required for a transportation project is eligible for "Relocation Assistance." All activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (see Appendices B and E).

2.1.4.3 Environmental Justice

2.1.4.3.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This executive order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is based on the Department of Health and Human Services poverty guidelines. For the year 2000, the guidelines define low income as $18,392 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, and found in Appendix B of this document.

2.1.4.3.2 Affected Environment

Rural San Joaquin Valley communities typically have high percentages of Hispanics, an established minority population. The 2000 U.S. Census data in Table 2.3 report a large Hispanic population in Porterville (49.4 percent), Terra Bella, (66.5 percent), Ducor (72.6 percent), as well as Tulare County as a whole (50.8 percent). The second largest ethnic group is whites: Porterville (42.5 percent), Terra Bella (28.3 percent), Ducor (24.2 percent), and Tulare County (41.8 percent). All other ethnic groups

together comprise between 2.2 and 6.2 percent of the population. These data confirm established "minority" communities of Hispanics.

Table 2.3 Ethnicity Data

Population and Ethnic Groups	Location			
	Ducor	Terra Bella	City of Porterville	Tulare County
Population, 2000	504	3,466	39,615	368,021
Hispanic or Latino (of any race)	72.6%	66.5%	49.4%	50.8%
Non Hispanic or Latino	27.4	33.5	50.6	49.2
One race	26.4	31.8	48.7	47.3
White	24.2	28.3	42.5	41.8
Black or African American	0.2	0.3	0.8	1.4
American Indian and Alaska Native	0.4	0.7	1.1	0.8
Asian	1.6	2.4	4.1	3.1
Native Hawaiian and Other Pacific Islander	0.0	0.0	0.1	0.1
Some other race	0.0	0.1	0.1	0.1
Two or more races	1.0	1.7	1.9	1.9

Source: 2000 US Census Bureau

The median incomes of households and families in Tulare County and this sector of the county are less than the state average. The median income in California is $47,493 for households and $53,025 for a family of four (see Table 2.4).

Table 2.4 Comparison of Median Incomes

Location	Median Income in 1999 (Dollars)	
	Households	Families
Porterville	32,046	35,136
Terra Bella	25,313	24,750
Ducor	33,125	30,694
County of Tulare	33,983	36,297
State of California	47,493	53,025

U.S. Census poverty data indicate that the percent of family and individual poverty levels for Ducor, Terra Bella, and Porterville are higher than average (see Table 2.5). The poverty threshold is $18,392 for a family of four and $9,183 for individuals.

Table 2.5 Percent Poverty Levels

Community	Family	Individual
Ducor	24.8	30.0
Terra Bella	24.7	39.6
Porterville	20.3	25.7
Tulare County	18.8	23.9
California	10.6	14.2
United States	9.2	12.4

2.1.4.3.3 Impacts

The communities of Ducor and Terra Bella east of State Route 65 and Porterville city housing are outside the right-of-way needed for this proposed project (see Figure 1-2). Therefore, the purchase of minor strips of land adjacent to the highway would not cause disproportionately high and adverse effects on any minority or low-income populations as per Executive Order 12898 regarding environmental justice. Relocation benefits would be available for the one farmhouse, parking, and access into two businesses. The project effects, such as construction noise, would be distributed uniformly along the length of the project.

Based upon the above discussion and analysis, the proposed project would not cause disproportionately high and adverse effects on any minority or low-income populations as per Executive Order 12898 regarding environmental justice.

2.1.5 Utilities/Emergency Services

2.1.5.1 Affected Environment

Overhead utility lines follow portions of the western right-of-way of State Route 65. Periodically the lines cross over the highway. The utility poles include electrical power lines, fiber-optic cable, and telephone lines. Underground utilities and the Deer Creek Recreational Vehicle Park drainage basin tend to follow the eastern highway right-of-way.

Porterville emergency services, located downtown, include the police department, two fire stations north of State Route 190, the Sierra View District Hospital, Creekside Surgery Center, and the Porterville Convalescent Hospital.

The following agencies provide emergency services for Terra Bella, Ducor, and county lands:

- Tulare County Sheriff's Department—downtown Porterville
- Fire and emergency medical services—23658 Avenue 95, Terra Bella
- Ducor volunteer fire station—supported by Terra Bella and Richgrove stations.

2.1.5.2 Impacts

Emergency response times should improve with project completion. Also, during construction, emergency vehicles will be given priority access to State Route 65.

One drainage basin at the Deer Creek Recreational Vehicle Park may require relocation.

2.1.5.3 Avoidance, Minimization, and Mitigation Measures

Prior to construction, public utilities affected by the project would be relocated. During construction, one to two lanes of traffic would remain open. Emergency vehicles would be given priority.

2.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities

2.1.6.1 Regulatory Setting

The Federal Highway Administration directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (23 Code of Federal Regulations). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans and the Federal Highway Administration are committed to carrying out the 1990 Americans with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

2.1.6.2 Affected Environment

Two additional lanes would be built east of the existing pavement in the southern two-thirds of the project and west of the existing pavement for the northern one-third of the project (as indicated by the red line in Figure 1-2). Between Avenue 112 at kilometer post 22.0 (post mile 14.0) and Avenue 120 at kilometer post 24.4 (post mile 15.2), the new lanes would shift from east to west of the existing pavement.

County and private roads are located throughout the project area (see Figure 1-2), though most do not directly intersect with State Route 65. Because additional right-of-way is needed to meet current four-lane expressway engineering standards, the new right-of-way would displace three public roads and some private farm roads.

The city of Porterville does not have a designated system of bikeways. Proposed bikeways include two parallel streets east and west of State Route 65 (Main Street and Newcomb Street). Bicycles are allowed on State Route 65 from Porterville to the Kern County line. The current highway shoulders vary in width from 1.5 to 2.4 meters (5 to 8 feet).

The Porterville Municipal Airport is located a mile west of State Route 65 between Avenues 128 and 136. The highway serves as a link between the airport and downtown Porterville north of State Route 190 and the Tule River.

2.1.6.3 Impacts

Private and county frontage roads—Divisich Avenue, Norwood Road, and an unnamed road between Avenues 112 and 120 on the west side of State Route 65—would be relocated. During construction, lane closures and changes in traffic circulation would occur. Delays normally would be limited to no longer than 20 minutes (10 minutes in each direction of travel). The public would be informed of the construction work and its impacts upon the surrounding communities and would be given information on alternative routes to avoid anticipated congestion.

The improved highway shoulders would be 3 meters (10 feet) wide and include rumble strips. Bicyclists could use the highway shoulders with the rumble strips separating them from the high-speed vehicular lanes. The expressway's rural setting, plus the long distances between destinations, discourages pedestrian traffic.

2.1.6.4 Avoidance, Minimization, and Mitigation Measures

During construction, a traffic management plan would help reduce traffic delays, congestion, and accidents. Standard Caltrans construction practices include information on roadway conditions, portable changeable message signs, lane and road closures, advance warning signs, alternate routes, reverse and alternate traffic control, and a traffic contingency plan for unforeseen circumstances and emergencies.

2.1.7 Visual/Aesthetics

2.1.7.1 Regulatory Setting

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration in its implementation of National Environmental Policy Act [23 U.S.C. 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest, taking into account adverse environmental impacts including, among other things, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…

enjoyment of *aesthetic,* natural, scenic and historic environmental qualities." [California Public Resources Code Section 21001(b)].

This section assesses the visual change that would be introduced by the project and the potential impacts.

2.1.7.2 Affected Environment

The visual quality of the entire project area can be typically described as rural, agricultural land with mature orchards—though not large in scale—and fields. No significant scenic resources were observed (Visual and Scenic Resources Evaluation, 2004).

2.1.7.3 Impacts

The widened roadway and new cut slopes of the proposed project would result in a minimal impact to its visual character. Most of the proposed changes would be visually absorbed into the "viewshed" and would remain subordinated to the overall rural character of the landscape.

Post-construction short-term adverse visual impacts would include exposed soil, an impact expected to diminish as the project site weathers and mitigation components become established.

2.1.7.4 Avoidance, Minimization, and Mitigation Measures

Any work affecting and removing riparian vegetation would require the following mitigation.

The cut and fill slopes would be rounded to naturalize their appearance. Existing side slopes of the project area are relatively flat with occasional l to 1.5 ratio (45-degree) side slopes at bridge abutments, creek/stream crossings, and within the road cuts and fills near the county line. To minimize the environmental impacts at these locations, side slopes at a ratio of 1 to 2 are acceptable, with transition to 1 to 4 side slopes as soon as possible.

Caltrans recommends that slopes be permanently stabilized after grading work to reduce erosion. Preferably slopes should be cut or filled at a 1 to 4 ratio or flatter to help stabilize slopes and create visual cohesion with the existing landscape. Slopes flatter than a 1 to 4 ratio would allow maintenance personnel to access the right-of-way with heavy equipment to mow weeds, remove trash, and keep the right-of-way

clean. Caltrans also recommends saving topsoil/duff material and applying it to cut slopes and other disturbed areas to enhance re-vegetation.

Caltrans landscape architecture and biology branches would determine the species and number of replacement trees. Native trees would be replaced. Colorful vegetative growth would soften the visual impacts to the newly constructed highway. Seed mixes would, as closely as possible, resemble and blend with existing vegetation, maintaining visual unity. All disturbed areas would receive erosion control and storm water runoff control measures.

Landscape treatments would be incorporated to reduce the negative visual impacts associated with soundwalls. Soundwalls should be located in a manner that is least intrusive and minimizes visual impact. Architectural treatments, such as color and/or textures should reduce glare and relate to other structures within the region. In addition, highway planting and irrigation shall be provided along the soundwall in accordance with Caltrans policy.

Landscaping as determined by the district landscape architect would be provided in accordance with Caltrans policy. Replacement vegetation would maintain the visual quality at the site while additional improvements to the landscape would enhance the visual effect.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

2.2.1.1 Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The 100-year floodplain is defined as "the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year." An encroachment is defined as "an action within the limits of the 100-year floodplain."

2.2.1.2 Affected Environment

Flood insurance-rate maps were evaluated to determine if any portion of the proposed project is within an area that could be subjected to 100-year flooding. These maps show that most of the project is in Zone C, which is designated as outside of the 500-year floodplain. The 100-year base floodway coincides with White River and Deer Creek. The floodway crosses the project at the following locations within Zone A, an area subjected to the 100-year flood with no base flood elevations determined:

- Kilometer post 8.2 (post mile 5.1)—White River Bridge (bridge #46-0210)
- Kilometer post 21.0 (post mile 13.1)—Deer Creek Bridge (bridge #46-0213)
- Kilometer post 22.4 (post mile 13.9)—concrete box culvert
- Kilometer post 28.5 (post mile 17.7)— Poplar Ditch

Caltrans Structure Hydraulics Division is reviewing the current and proposed bridges and channel capacities at White River and Deer Creek (see Figure 2-1 for a view of the White River bridge crossing). The maximum discharge the existing bridge at White River is able to pass is a 25-year storm. Deer Creek Bridge, with no history of bridge overtopping, has adequate vertical clearance for the 100-year discharge. Scour problems detected in 1991 at Deer Creek Bridge have stabilized. Both channels have some channel constrictions.

Figure 2-1 White River Bridge Crossing (Looking South)

2.2.1.3 Impacts

The highway crosses the 100-year floodplain at Poplar Ditch, White River, Deer Creek, and their tributaries. The existing drainage flow pattern would be widened at White River and Deer Creek. The existing bridges would be lengthened to match the proposed bridges. These structures would be built to meet current design standards.

The proposed roadway would be raised where needed to minimize potential roadway closure due to flooding. Additional culvert crossings may be added to provide more openings for passage of floodwaters. The scope of the proposed work would not affect the designated flood zones as depicted on the flood insurance-rate maps (Appendix F). The bridges cross over the floodplain; therefore, this project does not fall within the limits of the base floodplain.

2.2.1.4 Avoidance, Minimization and/or Mitigation Measures

The proposed project would not increase the base flood backwater elevations, and there is a low risk of overtopping the highway or damaging the adjacent property. The project does not constitute a significant floodplain encroachment as defined as 23 Code of Federal Regulations, Sections 650.105(q). The preliminary hydraulic results are based on the existing structures. A more refined analysis will be performed during the design phase of the new structures.

2.2.2 Water Quality and Storm Water Runoff

2.2.2.1 Regulatory Setting

Section 401 of the Clean Water Act, the primary federal law regulating water quality, requires water quality certification from the state board or regional board when a project (1) requires a federal license or permit—Section 404 is the most common federal permit for Caltrans projects—and (2) will cause discharge into waters of the United States.

Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System permit system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. To ensure compliance with Section 402, the State Water Resources Control Board has issued a National Pollutant Discharge Elimination System Statewide Storm Water Permit to regulate storm water discharges from Caltrans facilities. The permit regulates storm water discharges from Caltrans right-of-way both during and after construction, as well as from existing facilities and operations.

In addition, the State Water Resources Control Board issues a construction general permit for most construction activities of 0.4 hectare (1 acre) or greater that are part of a common plan of development exceeding 2.02 hectares (5 acres) or that have the potential to significantly impair water quality. Some construction activities may require an individual construction permit. Caltrans projects subject to the construction general permit require a Storm Water Pollution Prevention Plan, while all other projects require a Water Pollution Control Program.

Subject to Caltrans review and approval, the contractor prepares both the Storm Water Pollution Prevention Plan and the Water Pollution Control Program. The Water Pollution Control Program and Storm Water Pollution Prevention Plan identify construction activities that may cause pollutants in storm water and measures to control these pollutants. Because neither the Water Pollution Control Program nor the Storm Water Pollution Prevention Plan is prepared at this time, the following discussion focuses on anticipated pollution controls.

Additional laws regulating water quality include the Porter-Cologne Water Quality Act, Safe Drinking Water Act, and Pollution Prevention Act. State water quality laws are codified in the California Water Code.

In California, the Environmental Protection Agency has delegated administration of the federal National Pollutant Discharge Elimination System program to the State Water Resources Control Board and nine regional boards. This project is located within the jurisdiction of the State Water Resources Control Board and the Central Valley Regional Water Quality Control Board. The State Water Resources Control Board has developed and issued a statewide National Pollutant Discharge Elimination System Storm Water Permit that applies to Caltrans.

2.2.2.2 Affected Environment

Surface Water

The southern portion of the San Joaquin Valley drains into the Tulare drainage basin. Two intermittent major water bodies, Deer Creek and White River, are within the proposed project limits. Other surface water resources include Poplar and Deer Creek ditches, agriculture and oil field-generated wastewater ponds, seasonal wet pools, and temporary drainages.

Groundwater

The project area is located within the San Joaquin groundwater basin that drains toward Tulare Lake via Deer Creek and White River. Groundwater, found at depths

from 12 to 91 meters (40 to 300 feet), is generally of poor quality and mostly used for agricultural purposes.

2.2.2.3 Impacts

Although no groundwater impacts would be expected from the project, short- and long-term surface water quality impacts could occur. The primary pollutants in storm-water drainage are sediments, petroleum distillates, and metals. By implementation of a Storm Water Pollution Prevention Plan during construction and a Storm Water Management Plan after construction, no long-term impacts to surface water quality are anticipated.

The following are short-term changes to surface-water quality during project construction:

- Increased sediments, muddy water, and total dissolved solids.
- Toxicity due to chemical substances originating from construction activities.
- Inadequate storm water drainage.

Other short-term changes include accidental spills of petroleum hydrocarbons (fuels and lubricating oils), sanitary wastes, and/or concrete waste that could affect surface water quality, vegetation, and wildlife habitat. These accidental spills can be acute, but are of short duration.

By incorporating proper and accepted engineering practices and best management practices, the proposed project would not produce significant impacts to water quality during construction or during its operation.

2.2.2.4 Avoidance, Minimization and/or Mitigation Measures

Since this pollution source is considered a non-point source, management measures and best management practices will need to be addressed during planning, design, construction, operation and maintenance stages.

A Storm Water Pollution Prevention Plan would be implemented during construction, to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges. The plan would also describe and ensure the implementation of best management practices to reduce or eliminate sediment and other pollutants in storm water as well as non-storm water discharges. Below are specific best management practices that must be addressed during the planning phase, construction phase, and operational phase.

Key management measures for roads, highways, and bridges include the following:

- Protect areas that provide important water quality benefits or that are particularly susceptible to erosion or sediment loss.
- Limit land disturbance such as clearing and grading and cut/fill to reduce erosion and sediment loss.
- Limit disturbance of natural drainage features and vegetation.
- Place bridge structures so that sensitive and valuable aquatic ecosystems are protected.
- Prepare and implement an approved erosion control plan.
- Ensure proper storage and disposal of toxic material.
- Incorporate pollution prevention into operation and maintenance procedures to reduce the amount of pollutants getting into surface runoff.

Permits needed for this proposed project include Section 401 (Water Quality Certification); Section 402 (Caltrans Statewide National Pollutant Discharge Elimination System Permit No. CAS000003 [SWRCB No. 99-06-DWQ]); U.S. Army Corps of Engineers 404 (Dredge/Fill Permitting); and Streambed Alteration Agreement pursuant to the California Department of Fish and Game code 1600 et. sec. In addition, a Notice of Intent would be filed with the State Water Resources Control Board. Because this project would disturb more than 0.4 hectare (1 acre) of soil, the following are also required:

1. A Notification of Construction shall be submitted to the Central Valley Regional Water Quality Control Board at least 30 days prior to the start of construction.
2. A Storm Water Pollution Prevention Plan shall be prepared and implemented during construction to the satisfaction of the resident engineer.

A Notice of Construction Completion shall be submitted to the Central Valley Regional Water Quality Control Board upon completion of the construction and stabilization of the site.

2.2.3 Geology/Soils/Seismic/Topography

2.2.3.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use data for the anticipated maximum credible earthquake from young faults in and near California. A maximum credible earthquake is defined as the largest earthquake expected to occur on a fault over a particular period of time.

2.2.3.2 Affected Environment

The Kern Front Fault Zone crosses the southern end of the project at approximately kilometer post 3.2 (post mile 2.0). Neighboring faults are the San Andreas 121 kilometers (75 miles) to the west and the White Wolf faults 97 kilometers (60 miles) to the south.

2.2.3.3 Impacts

The Kern Front Fault could produce a maximum credible earthquake of magnitude 6.5 on the Richter scale. This is a normal style of fault where the predominant sense of motion is in the vertical component. It is anticipated the depth of the bedrock will vary throughout the project limits and ground rupture could occur in the highway should a significant quake occur.

2.2.3.4 Avoidance, Minimization and/or Mitigation Measures

Because the area could experience earthquakes with ground movement, the structures and the highway would be built to withstand these movements.

2.2.4 Paleontology

2.2.4.1 Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. Although no federal law specifically protects natural or paleontological resources, a number of laws have been interpreted to do so, specifically the Antiquities Act of 1906 that protects historic or prehistoric ruins or monuments and objects of antiquity. This act has been amended to specifically allow funding for paleontological mitigation. Under California law, paleontological resources are protected by the California Environmental Quality Act, the California Administrative Code, Title 14, Section 4306 et seq., and Public Resources Code Section 5097.5.

2.2.4.2 Affected Environment

The southern portion of the proposed project area has non-marine sandstone and conglomerate of the Kern River Formation, a formation designated as "high sensitivity" for unique vertebrate (animals with a backbone) land fossils. Much of the northern part of the project area, however, is covered by Quaternary (1.6 million-years ago to present) non-marine sediments and alluvium (water born sediments) classified as "moderately sensitive" for fossil resources. Though no vertebrate fossil sites are recorded within the project area, the geologic layers in the region do contain fossils.

2.2.4.3 Impacts

Any excavations may disturb fossils in three layers: Kern River Formation, Quaternary alluvium, and Pleistocene (early-Quaternary) sediments. The major excavations would be in the southern portion (or third phase) of the project area where the Kern River Formation ("high sensitivity") is found. In this area road cuts would be up to 8 meters (26 feet) deep.

2.2.4.4 Avoidance, Minimization and/or Mitigation Measures

Because a possibility exists that fossils would be encountered during the excavation phase of road construction, the following paleontological monitoring and mitigation is recommended:

- A qualified paleontologist will be retained to prepare a detailed mitigation plan prior to construction, attend pre-grading meetings, consult with grading and excavation contractors, monitor during construction, and recover fossils remains in a timely manner.
- Near the beginning of excavations, the principal paleontologist will conduct an employee environmental awareness training session for all persons involved in earth moving for the project.
- A paleontological monitor, under the direction of the qualified principal paleontologist, will be on site to inspect road cuts for fossils at all times during original grading involving sensitive geologic formations.
- If fossils are discovered, construction work in these areas would be halted or diverted to allow recovery of fossil remains in a timely manner.
- Fossil remains collected during the monitoring and salvage would be cleaned, repaired, sorted, and cataloged.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, would be deposited in a scientific institution with paleontological collections.

- A final report would be completed that outlines the results of the mitigation program.
- Where feasible, selected road cuts or large finished slopes in areas of critically interesting geology may be left exposed so they can serve as important educational and scientific features.
- A nonstandard special provision for paleontology mitigation would be included in the construction contract special provisions section to advise the construction contractor of the requirement to cooperate with the paleontological salvage.

2.2.5 Hazardous Waste/Materials

2.2.5.1 Regulatory Setting

Many state and federal laws that regulate hazardous materials and hazardous wastes also include a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes and materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation, and Liability Act is to clean up contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for the "cradle to grave" regulation of hazardous wastes. Other federal laws include the Community Environmental Response Facilitation Act of 1992, Clean Water Act, Clean Air Act, Safe Drinking Water Act, Occupational Safety and Health Act, Atomic Energy Act, Toxic Substances Control Act, and the Federal Insecticide, Fungicide, and Rodenticide Act.

In addition to these acts, Executive Order 12088, Federal Compliance with Pollution Control mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

2.2.5.2 Affected Environment

The study area consists of 165 parcels within and adjacent to the proposed right-of-way. Parcels include agricultural land, rural single family residences, irrigation and individual domestic ground water wells, individual sewage systems, oil wells, retail markets, service stations, and commercial and light industry.

Five parcels, illustrated in Appendix G, have a moderate to high potential to affect the proposed highway-widening project. Hazardous waste products include gasoline, diesel, solvents, and propane. Gasoline leakage in at least one site has affected the groundwater (see Table 2.6).

Table 2.6 Potential Hazardous Waste Sites

Present Tenant/ Assessor's Parcel Number	Address	Hazardous Waste Potential	Comments
Jack Griggs Inc., Propane Service Station 268-130-013	952 Ave 128	High	Site has a potential of high hazardous waste concern because of its present use.
Pearson Ranch Center 268-130-023	1018 Ave 128[1]	High	Site has above ground fuel tanks southwest of buildings.
G&M Auto Repair 320-060-032	23171 Ave 96	High	Site is outside of project design area.
Highway 65 Diesel 320-110-069	23299 (Building D) Ave 88[1]	Moderate	Partial site acquisition is outside of hazardous waste area.
Sierra Mini-Mart 320-351-035	23290 Ave 95[2]	High	Site is under investigation by regulatory agencies for soil and ground water contamination.

[1] *Partial right-of-way is needed*
[2] *Partial right-of-way may be needed for intersection improvements*

Jack Griggs Inc., Propane Service Station—The station stores liquid propane in large, aboveground tanks. A Special Use Permit (PSP) 00-068 (ZA) was issued by Tulare County Planning Department on August 15, 2001 to bring the existing bulk propane storage facility into compliance. The permit also allows the station to expand by adding twelve 30,000-gallon tanks, the relocation of one 30,000-gallon tank, and the elimination of one 15,000-gallon and two 5,000-gallon tanks.

Pearson Ranch Center—From long use of petroleum hydrocarbons at the site, soils may be affected. Present use includes gas and diesel above ground tanks, oil drums, and compressed gas cylinders located southwest of the large building on site.

G & M Auto Repair—From long use of petroleum hydrocarbons at the site, soils are affected.

Highway 65 Diesel—The repair shop's concrete-lined sump shows soil staining beyond the perimeter of the concrete pad. Also present is an above ground tank for waste-oil, various solvent containers, and waste-oil filters.

Sierra Mini-Mart—The business has a monitoring well and a history of petroleum hydrocarbons in the soil and groundwater.

Active oil wells with four to five discharge ponds are located on two parcels about three miles south of the city of Porterville. At least one pond is within the proposed project limits. Naturally occurring crude oil is specifically exempt from environmental regulations and thus a preliminary site investigation is not required. Structural or maintenance considerations would need to be reviewed prior to construction of the project.

No serpentine and ultramafic rocks are recorded that contain naturally occurring asbestos. However, asbestos is present on the barrier-rail shims of White River Bridge (bridge #46-0210) and Deer Creek Bridge (bridge #46-0210). Asbestos could also be present on utilities, including the overhead railroad bridge (Orris Bridge #46-0211).

The soil near Deer Creek Bridge had one high surface sample that exceeded the regulatory threshold for lead.

Utilities within the proposed right-of-way include electrical power lines, fiber-optic cable, and telephone lines. Power transformers associated with the power lines or other electrical or hydraulic equipment may contain a chemical (polychlorobiphenols) that requires appropriate disposal.

Public and private water wells are located within the proposed project limits that could be affected by the proposed project.

2.2.5.3 Impacts

Table 2.6 lists five properties with moderate to high potential for affecting the proposed highway-widening project. The purchase of Pearson Ranch Center and Highway 65 Diesel would be required for the project right-of-way. A portion of the Sierra Mini-Mart parcel may be required for intersection improvements. Any property

purchased for the project right-of-way would need to be certified free of hazardous waste.

Although lead is present near the Deer Creek Bridge in the top 15 centimeters (6 inches) of soil, statistically the soil would most likely not be considered a hazardous waste if treated as a whole. Any excess soil that is generated should be stockpiled and tested to better characterize the waste. Asbestos also is present on the barrier rail shims of Deer Creek and White River bridges and may also occur on existing utilities. Standard waste handling provisions would be included in the construction contract for asbestos and lead.

Abandoned wells or existing agricultural wells located within the proposed right-of-way would be eliminated in accordance with Department of Water Resources requirements. Existing agricultural wells would be reconstructed.

2.2.5.4 Avoidance, Minimization and/or Mitigation Measures

Steps would be taken to reduce or eliminate any airborne dust. Water should be available at all times to moisten the soil in work areas where activities could potentially stir up aerially deposited lead.

Prior to any excavation or other soil disturbance, appropriate health and safety measures, such as a project specific Lead Compliance Plan must be developed and implemented to prevent or minimize lead exposure to employees and the public. Coordination of any permits is needed.

The demolition of water wells within the project limits must be in accordance with standards prepared by the Department of Water Resources (Bulletins 74-90) Title 23, California Code of Regulations and local regulatory standards.

2.2.6 Air Quality

2.2.6.1 Regulatory Setting

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its state counterpart is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards. Standards established for carbon monoxide, nitrogen dioxide, ozone, and particulate matter is 10 microns (0.001 of a centimeter or 0.00039 of an inch) in diameter or smaller.

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that

are not first found to conform to the Clean Air Act requirements. The proposed project must conform on both the regional level and project level to be approved.

Regional level conformity is concerned with how well the region is meeting the standards set for the pollutants listed above. Based on Regional Transportation Plans, which include all transportation projects planned for a region, usually for the next 20 years, an air quality model is run to determine if the implementation of those projects would result in a violation of the Clean Air Act. If no violations would occur, the regional planning organization, such as the Tulare Council of Governments and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the Regional Transportation Plans are in conformity with the Clean Air Act. If, however, violations would occur, the projects in the Regional Transportation Plans must be modified until conformity is attained. If the design and scope of the proposed transportation projects are the same as described in the Regional Transportation Plans, then a proposed project is deemed to be in conformity at the regional level.

Conformity at the project-level is also required for the pollutants carbon monoxide, nitrogen dioxide, ozone, and particulate matter that is 10 microns in diameter or smaller. A region meeting the standard for a given pollutant is in “attainment” for that pollutant. A region not meeting the standard is designated a “non-attainment” area for that pollutant. Previously designated non-attainment areas that recently met the standard are called “maintenance” areas. If a project is located in a non-attainment or maintenance area for a given pollutant, additional air quality analysis and reduction measures for that pollutant—frequently carbon monoxide and particulate matter—are required.

The Environmental Protection Agency established the National Ambient Air Quality Standards for six pollutants: ozone, carbon monoxide, suspended particulate matter, nitrogen dioxide, sulfur dioxide, and lead. Lead is dealt with under Hazardous Waste Section 2.2.5.

Each pollutant is evaluated differently, depending upon if it occurs on a regional or project level. The main pollutants related to transportation projects are ozone, carbon monoxide, and particulate matter.

2.2.6.2 Affected Environment

The proposed project is located in the San Joaquin Valley Air Basin. The mountain ranges that border the air basin influence the wind speed and direction affecting both the climate and the dispersion of air pollutants in the San Joaquin Valley.

Due to mountain ranges bordering the air basin, temperature inversions frequently occur in the valley. In an inversion, upper air becomes warmer than the air beneath it. Because warm surface air cannot rise into an even warmer layer, surface air and its pollutants are trapped at ground level. Inversions are more prevalent and of greater magnitude in late summer and fall.

The San Joaquin Valley Unified Air Pollution Control District administers air quality regulations developed at the federal, state, and local levels. For Tulare County, ozone, carbon monoxide, and particulate matter are of particular concern. Ozone is considered a regional pollutant; carbon monoxide and particulate matter are considered project-level pollutants.

For federal standards, Tulare County is considered non-attainment/severe for ozone, attainment/maintenance for carbon monoxide, and non-attainment/serious for particulate matter. For state standards, Tulare County is considered non-attainment for ozone and particulate matter, and attainment for carbon monoxide (see Table 2.7).

Table 2.7 Air Quality Emissions Analysis for Tulare County

Criteria Pollutant	Federal Standard	Federal Attainment Status	State Standard	State Attainment Status
Ozone	0.12 ppm (1 hour average)	Non-attainment/ Severe	0.09 ppm (1 hour average)	Non-attainment
Carbon Monoxide	35 ppm (l hour avg.) 9 ppm (8 hour average)	Attainment/ Maintenance	20 ppm (1 hour avg.) 9 ppm (8 hour average)	Attainment
Particulate Matter	150 g/m^3 (annual arithmetic mean)	Non-Attainment/ Serious	50 g/m3 (annual arithmetic mean)	Non-Attainment
Nitrogen Dioxide	0.053 ppm (1 hour annual average)	Attainment	0.25 ppm (1 hour annual average)	Attainment
Sulfur Dioxide		No Federal Standard		Attainment
Hydrogen Sulfide		No Federal Standard		Unclassified

2.2.6.3 Impacts

This capacity-increasing project is not exempt from the requirement that a conformity determination be made. The design concept and scope of the project is consistent with that assumed in regional emissions analysis. The project does not interfere with the timely implementation of traffic control measures.

Regional Analysis

The 2002 Regional Transportation Plan for Tulare County was found to conform by the Tulare County Association of Governments on February 2, 2002. The Federal Highway Administration and Federal Transit Administration adopted the air quality conformity finding on February 22, 2002. The project is also included in the Tulare County Association of Governments financially constrained February 22, 2002 Regional Transportation Improvement Program. The Tulare County Association of Governments 2002 Regional Transportation Improvement Program was found to conform by the Federal Highway Administration and Federal Transit Administration on February 22, 2002. The design concept and scope of the proposed project is consistent with the project description in the 2002 Regional Transportation Plan, the Preliminary Environmental Analysis Report, and the assumptions in the Tulare County Association of Governments' regional emissions analysis.

Project Level Analysis

Caltrans identified the following air pollutants of particular concern at the project level: carbon monoxide and particulate matter.

The local effects of this project for carbon monoxide and particulate matter concentrations must be considered to see if a hot-spot analysis is required before determining if the project conforms to state and federal standards.

Carbon Monoxide Hot Spot

The ambient carbon monoxide levels monitored at Visalia-N. Church Street stations, the closest stations with monitored carbon monoxide data, showed no violations in the last three years. The highest concentration was 4.23 parts per million in November 20, 2000.

The proposed project would not result in any local carbon monoxide hot spot. None of the projected carbon monoxide concentrations, with or without the project changes, would exceed the state or federal standards.

It is not anticipated that this project would create a new violation or worsen an existing violation of carbon monoxide. Therefore, based on the above analysis, no major local carbon monoxide impacts would occur as a result of the proposed project.

Particulate Matter Hot Spot

Between 2000 and 2002, the federal particulate matter standard (150 micrograms per cubic meter) was not exceeded at Visalia-N. Church Street Station, the nearest testing site.

This project would improve the level of service and reduce overall idling time at intersections. The reduction in idling time would reduce idle emissions of particulate matter, thus providing an overall air quality benefit. Based on the above, this project would not create a new violation or worsen an existing violation of the Particulate Matter National Ambient Air Quality Standard. Therefore, no mitigation measures are required for long-term operational air quality effects.

During construction, the proposed project would generate air pollutants. Construction equipment exhaust contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particle matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses. Occasional dust and odors at some residences close to the right-of-way could cause occasional annoyance and complaints.

2.2.6.4 Avoidance, Minimization and/or Mitigation Measures

Caltrans Standard Specifications pertaining to dust control and dust palliative requirement is a part of all construction contracts and should effectively reduce and control emission impacts during construction. Typical dust and emission control methods include watering of the construction site, cleaning paved streets, runoff and erosion control, traps on diesel-exhaust systems, and emission-control retrofits on older, higher polluting vehicles. The provisions of Caltrans Standard Specifications, Section 7-1.OF “Air Pollution Control” and Section 10 “Dust Control” require the contractor to comply with San Joaquin Valley Unified Air Pollution Control District’s rules, ordinances, and regulations.

2.2.7 Noise and Vibration

2.2.7.1 Regulatory Setting

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment.

For highway transportation projects with Federal Highway Administration involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway

project. The regulations contain noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criteria for residences (67 decibels) are lower than the noise abatement criteria for commercial areas (72 decibels). The following table lists the noise abatement criteria.

In accordance with the Caltrans Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, October 1998, a noise impact occurs when the future noise level—with the project—results in a substantial increase in noise level (defined as a 12-decibel or more increase) or when the future noise level—with the project—approaches or exceeds the noise abatement criteria. Approaching the noise abatement criteria is defined as coming within one decibel of the noise abatement criteria.

Table 2.8 Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$*	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above.
D	---	Undeveloped lands.
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

**dBA - Level of sound pressure measured in decibels expressed in A-weighted decibels (to approximate the way humans interpret sound).*

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated into the project.

Caltrans Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is an

engineering concern. A minimum 5-decibel reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. The "reasonable" determination is a cost-benefit analysis. Factors used in determining if a proposed noise-abatement measure is reasonable include residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.

Traffic noise analysis consists of the following steps:

- Identification of noise-sensitive receptors such as residences, parks, churches, schools, libraries, and hospitals.
- Completion of a noise measurement survey to determine the existing noise levels at the sensitive receptors or an acoustically-equivalent locations.
- Modeling the future noise levels using SOUND 32, a Caltrans-approved software.
- Determination of feasible and reasonable noise abatement measures for areas affected by the project.

2.2.7.2 Affected Environment

The majority of the land use is agriculture with some isolated farmhouses. Housing consists mostly of single-family homes and two recreational-vehicle parks. The distances from State Route 65 centerline to the receptors (homes and recreational vehicle parks) range from 15 meters (50 feet) to 152 meters (500 feet).

Sites with housing and recreation vehicle parks were sampled for highway noise. The ten receptor locations are shown in Table 2.9 and Appendix H. Receptors 1 through 5 and 8 through 10 represent homes and farmhouses (residences) located near State Route 65. Receptors 6 and 7 represent two private recreational-vehicle parks north of Terra Bella along State Route 65. Measurements taken at these ten locations indicate that the existing noise levels are 53.4 to 61.5 decibels.

2.2.7.3 Impacts

Predicted future traffic noise levels, without abatement, range from 65 to 70 decibels. If this project is built, a traffic noise increase of 7.5 to 16.5 decibels is predicted to occur. The noise abatement criteria for all receptors is 67 decibels. Because the predicted noise levels exceed the noise abatement criteria, sound walls must be considered.

Soundwalls for widely spaced homes (receptors 3 through 5, 8, and 9) and one recreation vehicle park (receptor 6) are feasible but not reasonable for noise abatement (see Table 2.9). Sites 2 and 10 are neither feasible nor reasonable for sound walls. Site 1 does not qualify for abatement (Noise Study Report 2004).

Table 2.9 Noise Impact Analysis

Receptor Number and Location	Existing Hourly Noise Level (dBA)*	Predicted Noise Level without Project (dBA)	Predicted Hourly Noise Level with Project (dBA)	Predicted Noise Level with Abatement (dBA)	Predicted Wall Height Needed For Noise Abatement m (ft)	Feasible/ Reasonable
#1 West side of SR 65 near Ave. 12	56.5	62.0	65.0	**	**	**
#2 23169 Ave. 24	61.5	67.0	69.0	***	***	No/No
#3 22794 Hwy 65	60.5	67.0	69.0	64	3.7 (12)	Yes/No
#4 and #5 1.4 miles south to 0.5 mile north of Site 5	60.6	69.0	70.0	65	4.3 (14)	Yes/No
#6 9849 Rd 232	53.4	63.2	66.1	60	4.9 (16)	Yes/No
#7 10679 S. Orange Belt Dr.	55.5	66.2	69.5	64	4.3 (14)	Yes/Yes
#8 23730 Ave. 116	55.5	63.7	69.9	64	3.7 (12)	Yes/No
#9 East side of SR 65, north of Ave. 116	56.6	63.0	68.0	62	4.3 (14)	Yes/No
#10 East of SR 65, north of Ave 116	53.9	68.0	70.0	***	***	No/No

** dBA is the level of sound pressure measured in decibels*

*** Structure(s) do not qualify for abatement*

**** Future noise cannot be calculated because it is not feasible, given access and sight distance requirements*

The noise impact analysis (Table 2.9) shows one receptor location (number 10) for the "no build" alternative that would encounter significant (12 decibels or greater) noise impact by the year 2027. The "build" alternative shows four receptor locations (numbers 6, 7, 8, and 10) that would encounter significant (12 decibels or greater) noise impacts by the year 2027. One location, the Deer Creek Recreational Vehicle Park (location 7), can be abated/mitigated. The remaining locations can not.

2.2.7.4 Avoidance, Minimization and/or Noise Abatement

Sound Walls

Based on these noise studies, Caltrans and the Federal Highway Administration would incorporate noise abatement by building a sound wall at the Deer Creek Recreational Vehicle Park.

The sound wall would be 4.3-meters (14-feet) high and 56-meters (183-feet) long, along the right-of-way line (see Appendix H). The size and location are approximations based on current drawings and elevation information.

Calculations based on preliminary design data indicate that the barrier will reduce the noise level by 5.9 decibels at a cost of $126,000. If the final design conditions change substantially, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design and the public involvement.

Construction Noise

Construction noise would be intermittent and at various intensities depending upon the location and the type of construction activity. The noise would conform to the local noise level ordinance. Construction noise can be minimized through equipment noise control and administrative measures. Caltrans standard specifications provide guidance to the construction contractor for noise control: muffled construction equipment, temporary noise barriers, scheduled construction hours, and community notices.

2.3 Biological Environment

2.3.1 Natural Communities

The primary habitats within the biological study area are 70 percent agricultural (orchards and dryland farming), 28 percent ruderal (disturbed), 1 percent landscaped, and less than 1 percent riparian.

The majority of the habitats observed within the biological study area are the product of human activities. Agricultural crops, listed by acreage from greatest to smallest, are the following: hay, citrus, olive, pistachio, grape, and grain. Disturbed ruderal areas are dominated by non-native vegetation and normally are located next to highways, roads, in vacant lots, and near towns and some structures.

2.3.2 Wetlands and Other Waters

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredge or fill material into waters of the United States and wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if an obvious alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds there is (1) no practical alternative to the construction and (2) the proposed project includes all practical measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the Department of Fish and Game and the Regional Water Quality Control Boards. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify Department of Fish and Game before

beginning construction. If Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources a Lake or Streambed Alteration Agreement will be required. Department of Fish and Game jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Air Quality discussion in Section 2.2.2 for additional details.

2.3.2.2 Affected Environment

Wetlands and other jurisdictional waters represent less than one percent of the biological study area. Two jurisdictional waters of the United States (White River and Deer Creek) are within the project limits. Both are under the authority of the U.S. Army Corps of Engineers and the California Department of Fish and Game. These seasonal watercourses transport irrigation water and carry winter precipitation runoff. Both channels serve as potential nesting habitat for birds, movement corridors for wildlife, and a source of limited cover and forage. Native riparian vegetation includes shining willows (*Salix lucida* ssp. *lasiandra*) and a few blue elderberries (*Sambucus mexicana*). One valley oak (*Quercus lobata*) is located northwest of Deer Creek.

Four potential jurisdictional wetlands also are present. These seasonal, non-jurisdictional bodies of water do not connect to any waters of the United States. (Verification is pending from the United States Army Corps of Engineers regarding these potential wetlands.)

2.3.2.3 Impacts

The proposed project would result in permanent and temporary impacts at White River and Deer Creek (see Table 2.10). Appendix I shows the location of these wetlands.

Table 2.10 Estimated Impacts to Jurisdictional Waters of the U.S.

Watercourse	Permanent Impacts hectares (acres)	Temporary Impacts hectares (acres)
White River	0.0009 (0.002)	0.1 (0.3)
Deer Creek	0.002 (0.004)	0.3 (0.7)
Total	**0.0029 (0.006)**	**0.4 (1.0)**

The following are permanent impacts at White River and Deer Creek:

- Lengthening of the existing bridge decks on new concrete piles
- Construction of new bridge decks supported with concrete piles

The existing bridge at White River will be lengthened by 24 meters (79 feet) and supported with additional 24 concrete piles that will result in an overall length of 61 meters (200 feet). The new bridge, with sixty-six 0.4-meter-diameter (16-inch-diameter) concrete piles, will be constructed east of the existing bridge. Only the new bridge is expected to have piles embedded below the ordinary high-water mark.

The existing bridge at Deer Creek will be lengthened by 104 meters (341 feet) and supported with additional 84 concrete piles, giving the bridge an overall length of 173 meters (566 feet). The new bridge at Deer Creek will be constructed east of the existing bridge with 126 concrete piles, each 0.4 meter (16 inches) in diameter. Only the new bridge is expected to have piles embedded below the ordinary high water mark.

Temporary impacts include construction equipment, vehicles, and personnel within both channels.

2.3.2.4 Avoidance, Minimization and/or Mitigation Measures

Approximately 0.003 hectare (0.006 acre) of fill material (concrete piles) will be placed below the ordinary high water mark for both jurisdictional waters. This minimal impact would require a non-reporting Nationwide Number 14 Permit from the Army Corps of Engineers and no compensatory mitigation would be necessary. In addition, a Streambed Alteration Agreement pursuant to the California Department of Fish and Game code 1600 et. sec. would be required and compensatory mitigation would likely include establishment of native vegetation along the channel banks, thereby improving the overall quality of both riparian areas.

2.3.3 Animal Species

2.3.3.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish

and Game are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with special-status native wildlife categorized as uncommon to rare. Animal species that are officially listed as threatened and endangered are discussed in the section (2.3.2.2) below.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601–1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

2.3.3.2 Affected Environment

According to the sensitive-species database lists obtained from the Sacramento Field Office of the U.S. Fish and Wildlife Service and the California Department of Fish and Game, a total of 53 special-status animal species and two sensitive habitats occur or demonstrate the potential to occur within a 16-kilometer (10-mile) standard query radius of this project's biological study area.

These special-status animal species are listed in Appendix I. Of these, only three animal species are likely to occur within the biological study area: San Joaquin kit fox, valley elderberry longhorn beetle, and vernal pool fairy shrimp. These three species are discussed under Section 2.3.3 Threatened and Endangered Species.

In addition to these three threatened and endangered species, nesting cliff swallows (*Hirundo pyrrhonota*) are found beneath the White River Bridge (#46-0210), Deer Creek Bridge (#46-0213), and Orris Underpass Bridge (#46-0211). These swallows and their nests are protected under the Migratory Bird Treaty Act (15 United States Code 703-711), 50 Code of Federal Regulations Part 21, and 50 Code of Federal Regulations Part 10. Under this act, migratory birds, including swallow nests, must be protected from all construction-related activities. Protection is also covered under Fish and Game Code.

2.3.3.3 Impacts

The existing State Route 65 bridges at White River and Deer Creek would be lengthened. Before and during construction, cliff swallows would be excluded from the two bridges.

2.3.3.4 Mitigation

The lengthening of two bridges and the construction of two additional bridges will provide additional, long-term swallow habitat.

2.3.4 Threatened and Endangered Species

2.3.4.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act, United States Code, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Game is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act allows for take incidental to otherwise

lawful development projects; for these actions an incidental take permit is issued by the California Department of Fish and Game. For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Game may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.3.4.2 Affected Environment

Three listed species—San Joaquin kit fox, valley elderberry longhorn beetle, and vernal pool fairy shrimp—are likely to be adversely affected by the project.

San Joaquin Kit Fox

The San Joaquin kit fox (*Vulpes macrotis mutica*) is a federal endangered and state threatened animal. Based upon numerous sightings and signs (dens, tracks) east and west of State Route 65 between the mid-1970s to 2003, kit foxes are known to occur within the project region. Suitable foraging habitat for the kit fox exists within the biological study area, although a 2002 spotlight survey within two miles of the Kern and Tulare county line did not result in any positive sightings. For the purpose of this project Caltrans is inferring this species is present.

Valley Elderberry Longhorn Beetle

The federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) requires elderberry plants for its survival. A total of 14 blue elderberry shrubs with one or more stems measuring 2.5 centimeters (one inch) or greater in diameter at ground level were observed at Deer Creek, White River, and south of White River. Within the biological study area, one elderberry shrub has an exit stem hole that may be from the valley elderberry longhorn beetle. Ten elderberry shrubs occur within the riparian habitat along the two watercourses; four additional shrubs occur south of White River. Two shrubs would be avoided during construction. A fire on July 15, 2003 affected two of the four shrubs found south of White River. These two shrubs will be re-evaluated this spring to determine if they survived the fire.

Vernal Pool Fairy Shrimp

The federally listed vernal pool fairy shrimp (*Branchinecta lynchi*) lives in seasonal pools. Thirty-seven seasonal pools and puddles were observed within and adjacent to the biological study area. The pools are most common at intersections where vehicles have strayed from the highway asphalt surface, leaving tread marks in the soil, and at entrances to unpaved farm lots. Most pools occur within or adjacent to Caltrans right-

of-way. Protocol surveys conducted in some pools found two fairy shrimp species, including the threatened vernal pool fairy shrimp species *Branchinecta lynchi*. The pools had little or no vegetation; however, four pools contained some typical wetland vegetation.

2.3.4.3 Impacts

Potential direct effects

Kit fox foraging habitat would be lost or reduced by highway widening and construction activities: permanent loss of 132 hectares (325 acres); temporary loss of 81 hectares (200 acres); and reduced prey availability on some agricultural parcels. However, with the great amount of agricultural lands remaining in the project area and the likelihood of prey abundance, it is expected that the kit fox will not be greatly affected by the loss or temporary disturbance of foraging habitat within the proposed project area. Also, because construction activities would be limited to daytime hours, noise and light disturbances are not likely to affect the nocturnal habits of the kit fox.

Construction activities would affect 12 elderberry shrubs that would be transplanted.

Thirty-two of 37 seasonal pools and puddles, or 0.3 hectare (0.7 acre) of potential vernal pool fairy shrimp habitat would be permanently filled as a result of the proposed project.

Potential indirect effects

Kit fox currently are exposed to traffic along the existing highway, although no road-killed kit fox were observed during biological surveys. The additional two lanes may result in mortality, altered space use, and reduced kit-fox productivity.

No indirect effects are anticipated to occur as a result of the proposed project for either the valley elderberry longhorn beetle or the vernal pool fairy shrimp.

2.3.4.4 Avoidance, Minimization and/or Mitigation Measures

Pre-construction surveys in appropriate habitats would be conducted to identify the presence of any listed threatened and endangered species or important habitat for listed species. Designated staging areas for equipment storage, vehicle parking, and other project related activities within the biological study area would be pre-approved by a Caltrans regional biologist. The Natural Environment Study (December 2003) and the Biological Assessment for this project (March 2004) propose mitigation for the three listed species as summarized below.

San Joaquin Kit Fox

Caltrans would (1) conduct pre-construction surveys prior to ground disturbance to search for San Joaquin kit fox dens within the impact area; (2) conduct a meeting and training on the San Joaquin kit fox for construction personnel prior to groundbreaking activities; (3) adhere to Contract Special Provisions during construction; and (4) conduct construction activities during daytime hours to avoid potential disruption of San Joaquin kit fox nocturnal activities.

Caltrans proposes to mitigate, through land acquisition, for the permanent loss of 132 hectares (325 acres) of San Joaquin kit fox foraging habitat at a 1.1 to 1 ratio and the temporary loss of 81 hectares (200 acres) at a 0.5 to 1 ratio. Accordingly the total acreage to be acquired at a U. S. Fish and Wildlife Service approved site would be 185 hectares (458 acres).

Valley Elderberry Longhorn Beetle

Caltrans proposes to mitigate for the permanent loss of 12 elderberry shrubs in accordance with the Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). A 0.5-hectare (1.2-acre) site would be necessary for 12 transplanted shrubs, 130 replacement elderberry, and 138 native plant seedlings.

Proposed mitigation of additional elderberry stems that may grow on the 12 elderberry shrubs before construction begins includes up to 42 replacement elderberry and 42 additional native plant seedlings to be planted on 0.2 hectare (0.4 acre).

Vernal Pool Fairy Shrimp

Two disturbed seasonal pools and three roadside puddles would be designated as environmentally sensitive areas to be avoided during construction activities. These protected areas would be enclosed within a temporary fence.

Caltrans proposes to mitigate for the permanent loss of 0.3 hectare (0.7 acre) of vernal pool fairy shrimp habitat in accordance with the programmatic agreement for projects with relatively small effects on listed vernal pool crustaceans. Credits equivalent to 0.8 hectare (2.1 acres) would be purchased.

Final mitigation measures on endangered or threatened species would be specified in the Biological Opinion rendered by the U.S. Fish and Wildlife Service and agreed upon by both the Federal Highway Administration and Caltrans.

2.3.5 Invasive Species

2.3.5.1 Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

2.3.5.2 Affected Environment

Two invasive plant species are within the biological study area: yellow star-thistle (*Centaurea solstitialis*) and the bull nettle (*Solanum eleagnifolium*). These species are identified on the State of California, Department of Food and Agriculture Noxious Weed List (updated 19 April 2002). Yellow star-thistle is categorized under "C," which designates state-endorsed holding action and eradication only when found in a nursery. Bull nettle is a category "B," designated for eradication, containment, control, or other holding action at the discretion of the commissioner. No invasive species from the federal noxious weed list (updated 8 September 2000) were identified.

2.3.5.3 Impacts

Due to construction activities, small populations of yellow star-thistle and bull nettle would be removed.

2.3.5.4 Avoidance, Minimization and/or Mitigation Measures

The removal of yellow star-thistle and bull nettle plants within the project site is not likely to result in the further spread of these species.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and

projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act Guidelines, Section 15130 describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under the California Environmental Quality Act, can be found in Section 15355 of the California Environmental Quality Act Guidelines. A definition of cumulative impacts, under the National Environmental Policy Act, can be found in 40 Code of Federal Regulations, Section 1508.7.

2.4.2 Affected Environment

Resources that might warrant a cumulative impact analysis for this proposed project are visual, biology, and farmland. These resources extend outward various distances along this 29-kilometer (18-mile) north/south corridor. The visual resources include the entire "viewshed" that can be seen from the highway. A biological study area of a 3-kilometer (2-mile) radius surrounding the length of the proposed project is included because San Joaquin kit fox may forage within this area. Areas with prime farmland within 76 meters (250 feet) of the present highway centerline are compared to the entire county. Projects that could affect these resources are within the urban development boundary of Porterville or along the State Route 65 corridor.

The following Caltrans transportation improvement projects along this route were recently completed, under construction, or in the project approval phase:

- An asphalt-concrete overlay and shoulder widening of the existing two-lane highway south of White River (kilometer posts 0.0/5.1; post miles 0.0/3.2).

- An asphalt concrete overlay of the existing pavement (kilometer posts R8.0/R22.5; post miles 5.0/14.0).
- Installation of signals, lighting, and flashing beacons at Avenue 56.
- Traffic signals and left turn pockets at Avenue 128 (Teapot Dome Avenue) and Avenue 136 (Scranton Avenue) intersections within the Porterville City limits. (Recently completed).
- Intersection improvements at Avenue 56 (Sierra Avenue) and 95 (Terra Bella Avenue).

Tulare County has no development projects proposed for this area. The urban development boundaries of Porterville, Terra Bella, and Ducor allow for planned community expansion within those boundaries.

The City of Porterville reports they are planning for a 3.5 percent growth rate per year. Three possible projects east of State Route 65 and south of State Route 190 are within Porterville's Urban Development Boundary. The first is a city project to improve and widen Avenue 136 (Scranton Avenue) from two to four lanes east of State Route 65. This project would re-direct Wal-Mart Distribution Center truck traffic from Jaye Street to State Route 65. The second is an application for 40 acres of rural residential development for 60 lots northeast of Gibbons Avenue and Indiana Street. The third is for 40 acres of rural residential development for 30 lots northwest of Gibbons Avenue and Indiana Street.

2.4.3 Impacts

The highway project conforms to the circulation element of the Tulare County General Plan that envisions the highway as a four-lane expressway. No significant cumulative impacts are associated with this project. The addition of two lanes to State Route 65 would accommodate the expected city growth and would not change the population growth pattern. The relationship between the proposed project and growth in the area is expected to be one of accommodating planned growth, rather than one of growth inducement. Local development, in conformance with existing city and county plans, can be expected to occur in the general study area, particularly in areas designed for future urbanization.

The transportation projects on State Route 65 are rehabilitation and safety projects that have little or no affect on the area except to improve the roadway. The proposed widening of Avenue 136 east of State Route 65 would allow large Wal-Mart trucks better access into their distribution center located south of State Route 190 on S. Jaye

Street. Such projects have minimal economic, social, or environmental significance, and individually or cumulatively do not have a significant environmental effect.

Land use policies and underlying zoning discourage growth beyond the urban development boundaries in Porterville, Terra Bella, and Ducor. The project is not expected to measurably accelerate growth in the study area.

The regional landscape can accommodate the additional lanes and road shoulders without losing substantial visual quality. The almost total lack of trees and shrubs along the present highway permits unobstructed, expansive views of adjacent agricultural fields, distant foothills, and the Sierra Nevada Range. To retain this view quality, replacement landscaping would enhance the highway right-of-way with similar stature plants.

No county projects are scheduled south of Porterville's city limits along this highway corridor. The draft community plan for Terra Bella and Ducor addresses land use changes due to expected community growth; however, there is no indication of urban development within the biological study area that would threaten special-status species. Two potential City-of-Porterville projects south of State Route 190 would convert a total of 32.4 hectares (80 acres) of farmland within its urban boundary into 90 residential lots, a relatively small amount of development for the project area considering the length of the proposed project. Based on this information no measurable cumulative effects are anticipated to the San Joaquin kit fox foraging habitat, the valley elderberry longhorn beetle, and the vernal pool fair shrimp.

Right-of-way acquisitions for this project would include land slivers adjacent to the highway for a total of 70 hectares (174 acres) of farmland. No land parcels would be bisected. Although this farmland would be lost to another land use, the amount of prime farmland affected—0.000232 percent of total county farmland—is minor.

Under the California Environmental Quality Act, one residence would encounter significant (12 decibels or greater) noise impacts under the no build alternative, and three residences and one recreational vehicle park would encounter significant noise impacts with the build alternative by the year 2027. Only location 7 would qualify for sound abatement under the build alternative. The remaining three locations would not have abatement (or mitigation). This unmitigated impact elevates the environmental document to a Draft Environmental Impact Report under CEQA.

No other projects are scheduled in this rural environment that would increase the noise level. North of Ducor, the nearby county frontage roads serve residences and farm lots. Because no major changes in the estimated traffic on these rural roads is expected to occur in residence concentrations, the cumulative noise impact is considered negligible.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance Under CEQA

According to the California Code of Regulations, Article 20, Section 15382, "Significant effect on the environment means substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

3.2 Discussion of Significant Impacts

Noise

The project would be built in a rural area. Noise studies determined that sensitive receptors, while few in number, would experience an increase in traffic noise levels in excess of 12 decibels over the next 20 years. Also a few farmhouses and residences close to State Route 65 would experience a noise increase above the 67-decibel threshold—69 decibels without the project and 70 decibels with the project (see Table 2.9).

3.3 Mitigation Measures for Significant Impacts Under the California Environmental Quality Act

Noise

Sound walls are typically used for noise abatement for sensitive receptors along highways. One sound wall at Deer Creek Recreational Park is recommended. Noise abatement (sound walls) is not feasible or reasonable for two residences. Noise abatement is feasible, but not reasonable, for approximately 10 scattered farmhouses and residences (see Section 2.2.7). Noise abatement measures are not recommended at the locations because sensitive receptors are scattered and their costs would exceed what is reasonable.

Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope and environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including: project development team meetings, correspondence, e-mails, and phone calls. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

California Department of Conservation
On October 29, 2003, information about the Williamson Act land that would be converted to non-agricultural use by this project was mailed to California Department of Conservation.

California Department of Fish and Game
On June 16, 2003, a meeting was held on-site with California Department of Fish and Game regarding the proposed project's effects on California listed species. A pre-consultation summary based on this site visit was sent to Caltrans on June 16, 2003 concluding that an incidental take permit is not necessary due to proper avoidance and mitigation measures.

California State Historic Preservation Officer
The California State Historic Preservation Office concurred on April 14, 2004 that 15 properties within the proposed Terra Bella Expressway Project are not eligible for the National Register of Historic Places. This letter is included as Appendix C.

City of Porterville
City staff provided the following information: a Porterville bus schedule and proposed development and road plans within the Porterville Urban Development Boundary.

Lower Tule River Irrigation District
A meeting was held May 9, 2003 at the irrigation district office to gather information regarding Poplar Ditch. The irrigation district provided mapping and other pertinent data that supports this ditch as a non-jurisdictional water of the United States. The

documentation was included in the wetland delineation report sent to U.S. Army Corps of Engineers on May 21, 2003.

Native American Heritage Commission
No cultural resources were found in the Native American Heritage Commission records search for the proposed project area.

Native American Groups
Six individuals/tribes —Tule River Indian Tribe, Kern Valley Indian Community, Santa Rosa Rancheria, Native American Heritage Preservation Council of Kern County, and the Wukchumni Tribe—were notified about the proposed project. The Tule River Indian Tribal Council sent a cultural monitor during the Extended Phase I survey (archeology) at White River on isolate-finds 4 and 5. Numerous telephone conversations between Caltrans and the Tule River Tribe took place before and during the Extended Phase I survey.

Natural Resources Conservation Service
The Farmland Conversion Impact Rating Form AD-1006 was sent to the Natural Resources Conservation Service. Their completed form is exhibited in Appendix D.

Southern San Joaquin Valley Information Center of the California Historical Resources Information System
The information center, housed at California State University, Bakersfield, provided data on previous cultural resource investigations and known resources within a one-mile radius of the project area.

Tulare County
Tulare County provided the following: mapping—agriculture, Williamson Act, land use, and county zoning; spread sheets; Williamson Act parcels; assessor parcel maps; county road information; and county plans.

Tulare County Historical Society
Information was requested on historic resources within the proposed project area.

U.S. Army Corps of Engineers
A wetland delineation report was sent to the U.S. Army Corps of Engineers Sacramento Office on May 21, 2003. Further documentation and the revised wetland delineation report was sent to U.S. Army Corps of Engineers on September 10, 2003. The final verification is pending.

U.S. Fish and Wildlife Service

Caltrans met on-site with the consultant for biology and the U.S. Fish and Wildlife Service to evaluate potential project impacts to listed species and discuss survey results and potential mitigation efforts. U.S. Fish and Wildlife Service sent a species list to Caltrans. On April 7, 2004, a Biological Assessment was mailed to initiate Section 7 formal consultation for the proposed project effects to the San Joaquin kit fox, valley elderberry longhorn beetle, and vernal pool fairy shrimp. The Biological Opinion was received on September 13, 2004 concluding the Section 7 formal consultation.

Public Meeting

A public hearing is planned in Porterville for March of 2005.

Chapter 5 List of Preparers

This Draft Environmental Impact Report/Environmental Assessment was prepared by the Central Region of the California Department of Transportation. The following Caltrans staff helped in its preparation:

Judy Aguilar-Luna, Project Manager. M.S., Criminology – L.E., California State University, Fresno; 12 years experience in environmental planning and approximately 3 years experience in Program/Project Management. Contribution: Project Management.

Bryan Apper, Senior Environmental Planner. M.A., Environmental Planning, California State University Consortium; B.A., English, California State University, Northridge; 22 years experience in transportation and environmental planning. Contribution: Review document for compliance with state and federal environmental regulations and guidance.

Emad Araim, Senior Transportation Engineer. MS, Civil Engineering; 18 years experience. Contribution: Design Manager.

Christopher Brewer, Associate Environmental Planner (Architectural History). M.A. Public Administration, California State University, Bakersfield; 18 years experience in architectural history. Contribution: *Historic Architectural Survey Report* and *Historic Resource Evaluation Report*.

Abdulrahim Chafi, Transportation Environmental Engineer. Ph.D. Environmental Engineering, California Coast University, Santa Ana; 8 years professional experience in air, noise, and water. Contribution: *Air Quality Report*.

Carolyn A. Corn, Associate Environmental Planner. Ph.D., Botany, University of Hawaii; 30 years biology and environmental planning experience. Contribution: *Draft Environmental Impact Report/Environmental Assessment*.

Rajeev Dwivedi, Associate Engineering Geologist. Ph.D., Environmental Engineering, Oklahoma State University, Stillwater; 14 years environmental technical studies experience. Contribution: *Water Quality Report*.

Tom Fisher, Hydraulic Engineer. B.S., California State University, San Jose; 14 years experience in Hydraulics. Contribution: *Location Hydraulic Study Floodplain Evaluation*.

Gary Gagliolo, Associate Environmental Planner, Registered Environmental Health Specialist. B.A., Biological Science/Molecular Biology, California State University, San Jose; 25 years environmental experience. Contribution: *Initial Site Assessment.*

Lanawati Hadisudarmo, Assistant Project Manager. M.B.A., National University, Fresno; 3 years of project management experience. Contribution: Project Management Assistance.

Peter Hansen, Engineering Geologist. B.S., Geology, California State University, Fresno, 3 years paleontology experience. Contribution: prepared *Paleontological Identification Report*, oversight of *Paleontological Evaluation Report*.

Kimberly Hau, Environmental Planner. B.S., Agriculture and Animal Science, California State University, Fresno; 3 years environmental planning experience. Contribution: Prepared mapping for project.

Thaar Jawhar, Transportation Engineer. P.E., B.S., Civil Engineering, University of Missouri, Rolla; 8 years experience in Transportation and Geotechnical Engineering. Contribution: Design Manager and *Project Study Report*.

John Liu, Senior Transportation Engineer. B.S., M.S., Civil Engineering, University of California, Berkeley; 10 years traffic engineering experience. Contribution: *Operational Analysis and Safety Analysis*.

Bao Quoc Luong, Transportation Engineer. M.S., Civil Engineering, Portland State University; 4 years traffic engineering experience. Contribution: *Traffic Analysis*.

Dr. Karen M. Nissen, Associate Environmental Planner (Archaeology), Native American Liaison Central Region. Ph.D., Anthropology, University of California, Berkeley; 34 years professional experience in anthropology/ archaeology. Contribution: Native American Coordination.

Tamra Nunes, Associate Environmental Planner (Biologist). B.A., Biology, California State University, Fresno; 9 years of wildlife biology experience. Contribution: *Natural Environment Study*.

Alfredo V. Osuna, Transportation Engineer Technician. B.S., Mechanical Engineering, FEATI University, Manila, Philippine Islands; 4 years traffic engineering experience, Contribution: *Safety Analysis.*

Matthew Palmer, Associate Environmental Planner. M.A., Organizational Management, University of Phoenix, Fresno; B.S., Environmental Science, California State University, Fresno; 4 years environmental technical experience, Contribution*: Noise Study Report.*

Steve Ptomey, Associate Environmental Planner (Archaeology). B.A., Anthropology, California State University, Bakersfield; 15 years California and Great Basin archaeology. Contribution: Cultural Resource Evaluation. Negative *Archaeological Survey Report and* Negative *Historical Property Survey Report*.

Gloria Ramirez, Landscape Associate. University of California, Berkeley; 7 years experience in landscape architecture. Contribution: *Visual and Scenic Resources Evaluation*.

Bill Ray, Associate Environmental Planner (Archaeology). M.A., Interdisciplinary Studies (English and Anthropology), California State University, Stanislaus; 15 years archaeology and writing experience. Contribution: Draft Environmental Impact Report/Environmental Assessment editing.

Jane Sellers, Research Writer. B.A., Journalism, California State University, Fresno; 20 years writing and editing experience. Contribution: Environmental Assessment/Initial Study document editing.

Lea Spann, Associate Environmental Planner. B.A., Environmental Studies, University of California, Santa Barbara; 9 years hazardous waste/materials experience. Contribution: *Preliminary Site Investigation-Bridge Survey*.

Vickie Traxler, Senior Environmental Planner. M.S., Regional Resource Planning, Colorado State University; B.S., Environmental Science, Grand Valley State College; 10 years experience in resource planning. Contribution: Environmental Unit Supervisor.

Juergen Vespermann, Associate Environmental Planner. Civil Engineering Degree, Fachhochschule Muenster, Germany; 15 years transportation planning/environmental planning experience. Contribution: Prepared *Draft Environmental Impact Report/Environmental Assessment*.

Gordon E. Watkins, Right of Way Agent. B.S., Urban Land Development, California State University, Fresno; 10 years experience. Contribution: *Draft Relocation Study*.

Rick D. Wiley, Environmental Planner. A.A., American River College (Sacramento), Art Appreciation, Sacramento City College Law Enforcement Degree/California Highway Patrol Academy; 2 1/2 years Environmental experience. Contribution: Graphics.

Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

The California Environmental Quality Act requires that environmental documents determine significant or potentially significant impacts. In many cases, background studies performed in connection with the project indicate no impacts. A mark in the “no impact” column of the checklist reflects this determination. Any needed explanation of that determination is provided at the beginning of Chapter 2.

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
AESTHETICS - Would the project:	July 2002 field review-Gloria Ramirez Landscape			
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	X
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	X
AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	X	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	X	☐
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	X	☐
AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	X	☐
d) Expose sensitive receptors to substantial pollutant concentration?	☐	☐	☐	X
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X
BIOLOGICAL RESOURCES - Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	X	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	X	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	X	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	X	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X
COMMUNITY RESOURCES - Would the project:				
a) Cause disruption of orderly planned development?	☐	☐	☐	X
b) Be inconsistent with a Coastal Zone Management Plan?	☐	☐	☐	X
c) Affect life-styles, or neighborhood character or stability?	☐	☐	☐	X
d) Physically divide an established community?	☐	☐	☐	X
e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?	☐	☐	X	☐
f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?	☐	☐	X	☐
g) Affect property values or the local tax base?	☐	☐	☐	X
h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines?	☐	☐	☐	X
i) Result in alterations to waterborne, rail, or air traffic?	☐	☐	☐	X
j) Support large commercial or residential development?	☐	☐	X	☐
k) Affect wild or scenic rivers or natural landmarks?	☐	☐	☐	X
l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?	☐	☐	X	☐
CULTURAL RESOURCES - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
GEOLOGY AND SOILS - Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
HAZARDS AND HAZARDOUS MATERIALS - Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	X	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	X	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	X	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	X	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X
HYDROLOGY AND WATER QUALITY - Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	X
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	X	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	X
LAND USE AND PLANNING - Would the project:				
a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
MINERAL RESOURCES - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
NOISE - Would the project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			X	
POPULATION AND HOUSING - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			X	
PUBLIC SERVICES -				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?				X
Other public facilities?				X
RECREATION -				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X
TRANSPORTATION/TRAFFIC - Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)?	☐	☐	X	☐
e) Result in inadequate emergency access?	☐	☐	☐	X
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X
UTILITY AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	X	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X

MANDATORY FINDINGS OF SIGNIFICANCE -

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	X	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	X	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	X	☐

Appendix B Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5267
FAX (916) 654-6608

July 26, 2000

TITLE VI
POLICY STATEMENT

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, sex and national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

Jeff Morales

JEFF MORALES
Director

Appendix C State Historic Preservation Officer—Concurrence Letter

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

April 14, 2004

Reply To: FHWA040223C

Lynn Faraone, Chief
Central California Cultural Resources Branch
Department of Transportation
2015 East Shields Avenue, Suite A-100
Fresno, CA 93726-5428

Re: Determinations of Eligibility for the Proposed Terra Bella Expressway Project, Tulare County, CA

Dear Ms. Faraone:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (PA).

The California Department of Transportation (Caltrans) is requesting my concurrence pursuant to Stipulation VIII.C.5 of the PA, that the following properties are not eligible for the National Register of Historic Places (NRHP):

- 1311 Hwy 65, Ducor, CA
- 23154 Avenue 24, Ducor, CA
- 23169 Avenue 64, Ducor, CA
- 8205 Road 232, Ducor, CA
- 8487 Road 232, Ducor, CA
- 1119 S Wisconsin Street, Porterville, CA
- 1085 S Wisconsin Street, Porterville, CA
- 1047 S Wisconsin Street, Porterville, CA
- 1023 S Wisconsin Street, Porterville, CA
- 965 S Wisconsin Street, Porterville, CA
- 989 S Victory Street, Porterville, CA
- Southern Pacific Railroad
- Deer Creek Ditch
- Poplar Ditch
- 23171 Avenue 96, Ducor, CA

Based on review of the submitted documentation, I concur that the above properties are not eligible for the NRHP.

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 and e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

Stephen D. Mikesell
Acting State Historic Preservation Officer

Appendix D Farmland Conversion Impact Rating

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 10/28/03
Name Of Project 06-TUL-65, Terra Bella Expressway	Federal Agency Involved Federal Highway Administration
Proposed Land Use Agriculture	County And State Tulare County, California
PART II *(To be completed by NRCS)*	Date Request Received By NRCS

Does the site contain prime, unique, statewide or local important farmland? Yes ☐ No ☐
(If no, the FPPA does not apply -- do not complete additional parts of this form).

Acres Irrigated | Average Farm Size

Major Crop(s) Pasture, citrus, olive	Farmable Land In Govt. Jurisdiction Acres: 750,000 % 24	Amount Of Farmland As Defined in FPPA Acres: %
Name Of Land Evaluation System Used California Storie Index	Name Of Local Site Assessment System None	Date Land Evaluation Returned By NRCS 11/25/03

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	164.0			
B. Total Acres To Be Converted Indirectly	10.0			
C. Total Acres In Site	174.0	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	11.0			
B. Total Acres Statewide And Local Important Farmland	160.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.000232			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	38	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use	15	15			
2. Perimeter In Nonurban Use	10	10			
3. Percent Of Site Being Farmed	20	17			
4. Protection Provided By State And Local Government	20	20			
5. Distance From Urban Builtup Area	15	—			
6. Distance To Urban Support Services	15	—			
7. Size Of Present Farm Unit Compared To Average	10	5			
8. Creation Of Nonfarmable Farmland	25	2			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	7			
11. Effects Of Conversion On Farm Support Services	25	1			
12. Compatibility With Existing Agricultural Use	10	1			
TOTAL SITE ASSESSMENT POINTS	160	83	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	38	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	83	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	121	0	0	0

Site Selected: | Date Of Selection | Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side) **Form AD-1006 (10-83)**

This form was electronically produced by National Production Services Staff

Farmland Parcels Affected by Route 65 Widening

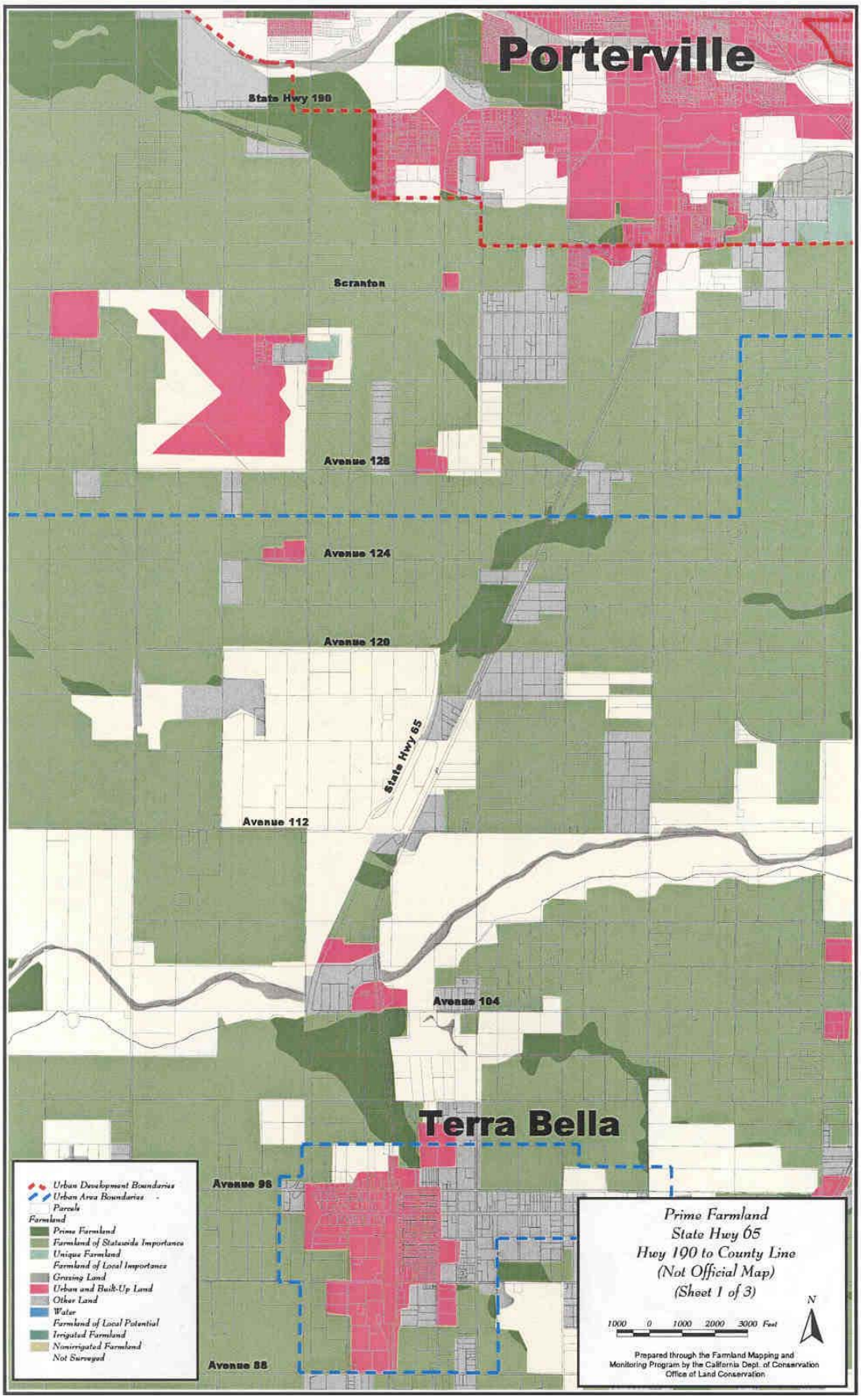
Affected Parcel Number [a]	Type of Farmland	Right-of-Way for Route 65 (hectares/ acres)	Total Parcel Size (hectares/ acres)	Percent of Parcel Affected	Present Parcel Use
339-170-010[a]	Local Importance	1.94/4.79	31.83/78.65	6.1	Pasture (dry)
339-170-011[a]	Statewide Importance	0.38/0.94	20.23/50.00	1.9	Citrus
339-170-012[a]	Statewide Importance	0.13/0.31	64.00/158.14	0.2	Vineyard
339-170-021[a]	Local Importance	3.99/9.87	63.65/157.29	6.3	Pasture (dry)
339-170-022[a]	Local Importance	1.93/4.76	30.18/74.57	6.4	Pasture (dry)
339-170-025[a]	Statewide Importance	0.42/1.03	8.06/19.92	5.2	Citrus
339-170-033[a]	Statewide Importance	0.33/0.81	3.86/9.55	8.5	Vineyard
339-170-043[a]	Local Importance	0.16/0.40	3.69/9.11	4.3	Pasture (dry)
339-170-047[a]	Local Importance	0.27/0.66	3.86/9.54	7.0	Pasture (dry)
339-170-051[a]	Local Importance	0.39/0.96	3.86/9.54	10.1	Pasture (dry)
339-140-001[a]	Statewide Importance	0.75/1.85	128.16/316.70	0.6	Pasture (dry)
339-140-002[a]	Local Importance	1.13/2.80	42.14/104.13	2.7	Pasture (dry)
339-140-009[a]	Local Importance	0.81/2.01	4.05/10.00	20.1	Pasture (dry)
339-140-010[a]	Local Importance	1.66/4.10	81.95/202.50	2.0	Pasture (dry)
339-140-011	Local Importance	0.35/0.86	7.75/19.15	4.5	Pasture (dry)
339-140-012[a]	Local Importance	0.39/0.97	55.62/137.45	0.7	Pasture (dry)
339-140-013	Local Importance	1.13/2.80	7.75/19.15	14.6	Pasture (dry)
339-140-014[a]	Local Importance	2.77/6.84	120.13/296.85	2.3	Pasture (dry)
339-110-001[a]	Local Importance	0.26/0.65	160.96/397.75	0.2	Pasture (dry)
339-110-002[a]	Local Importance	0.52/1.28	15.77/38.97	3.3	Horse and cattle grazing
339-110-006[a]	Local Importance	2.08/5.15	115.87/286.33	1.8	Pasture (dry)
339-110-007[a]	Statewide Importance	4.42/10.92	53.53/132.27	8.3	Citrus + pasture (dry)
339-110-008[a]	Local Importance	0.50/1.23	31.55/77.97	1.6	Pasture (dry)

Affected Parcel Number [a]	Type of Farmland	Right-of-Way for Route 65 (hectares/ acres)	Total Parcel Size (hectares/ acres)	Percent of Parcel Affected	Present Parcel Use
339-110-010[a]	Local Importance	0.31/0.77	32.05/79.20	1.0	Pasture (dry)
339-080-002[a]	Local Importance	1.76/4.34	15.83/39.11	11.1	Pasture (dry)
339-080-003[a]	Local Importance	1.99/4.92	15.79/39.03	12.6	Pasture (dry)
339-080-012[a]	Local Importance	4.33/10.69	31.68/78.28	13.7	Pasture (dry)
339-080-013[a]	Local Importance	0.67/1.65	31.84/78.69	2.1	Pasture (dry)
339-080-017[a]	Local Importance	0.50/1.24	97.56/241.07	0.5	Pasture (dry)
339-080-018[a]	Local Importance	0.64/1.58	32.00/79.07	2.0	Pasture (dry)
339-080-024[a]	Local Importance	0.76/1.87	15.43/38.12	4.9	Pasture (dry)
339-050-007[a]	Local Importance	2.16/5.33	15.58/38.50	13.8	Pasture (dry)
339-050-008[a]	Local Importance	0.53/1.32	15.58/38.50	3.4	Pasture (dry)
339-050-009[a]	Local Importance	2.39/5.90	89.23/220.50	2.7	Pasture (dry)
339-050-013[a]	Local Importance	1.51/3.73	76.26/188.43	2.0	Pasture (dry)
339-020-014	Local Importance	1.09/2.69	117.72/290.90	0.9	Pasture (dry)
339-020-017[a]	Statewide Importance	1.44/3.57	16.55/40.89	8.7	Citrus
321-170-066	Statewide Importance	0.00/0.01	1.56/3.86	0.3	Pasture (dry)
321-170-067	Statewide Importance	0.19/0.47	4.65/11.50	4.1	Pasture (dry)
321-160-019[a]	Local Importance	1.54/3.80	34.88/86.19	4.4	Pasture (dry)
321-160-030[a]	Statewide Importance	0.54/1.33	10.80/26.69	5.0	Pasture (dry)
321-160-031	Statewide Importance	0.29/0.71	8.04/19.86	3.6	Pasture (dry)
321-110-016[a]	Local Importance	0.40/0.99	5.94/14.67	6.7	Pasture (dry)
321-110-018	Statewide Importance	0.85/2.11	9.17/22.67	9.3	Citrus
321-080-034	Local Importance	0.03/0.08	2.02/5.00	1.6	Vacant
321-080-039	Statewide Importance	0.36/0.90	3.14/7.75	11.5	Citrus
321-080-045	Local Importance	0.65/1.60	2.02/5.00	32.0	Vacant
321-080-062	Local Importance	0.10/0.24	1.46/3.62	6.6	Vacant

Affected Parcel Number [a]	Type of Farmland	Right-of-Way for Route 65 (hectares/ acres)	Total Parcel Size (hectares/ acres)	Percent of Parcel Affected	Present Parcel Use
321-080-063	Local Importance	0.19/0.48	4.96/12.26	3.8	Pasture (dry)
321-040-011	Local Importance	0.97/2.39	5.53/13.66	17.5	Pasture (dry)
321-040-024[a]	Prime and Statewide Importance	1.25/3.09	57.74/142.68	2.2	Pistachio
321-040-025[a]	Local Importance	1.05/2.59	13.20/32.63	8.0	Pasture (dry)
320-320-007	Statewide Importance	0.25/0.62	12.14/30.00	2.1	Olive
320-320-011	Prime and Statewide Importance	0.40/0.99	13.92/34.40	2.9	Olive
320-310-005	Statewide Importance	0.47/1.16	13.92/34.40	3.4	Pasture (dry)
320-310-009	Statewide Importance	0.57/1.40	13.92/34.40	4.1	Olive
320-130-005	Statewide Importance	0.23/0.56	7.30/18.03	3.2	Vacant
320-130-011	Statewide Importance	0.08/0.21	4.13/10.21	2.1	Citrus
320-121-001	Statewide Importance	0.22/0.54	2.78/6.86	7.9	Citrus
320-121-002	Statewide Importance	0.22/0.55	2.91/7.19	7.6	Citrus
320-121-003	Statewide Importance	0.52/1.29	12.27/30.33	4.2	Citrus
320-110-063	Statewide Importance	0.52/1.29	5.68/14.04	9.2	Vacant
320-100-022	Statewide Importance	0.46/1.14	6.09/15.04	7.6	Vacant
320-100-025	Statewide Importance	0.23/0.58	3.27/8.08	7.2	Vacant
302-350-010	Local Importance	0.48/1.19	3.14/7.75	15.3	Pasture (dry)
302-350-011	Statewide Importance	0.21/0.53	5.91/14.61	3.6	Pasture (dry)
302-350-020	Local Importance	0.51/1.26	12.28/30.35	4.2	Pasture (dry)
302-340-035	Statewide Importance	0.20/0.50	2.02/5.00	10.0	Horse grazing
302-220-010[a]	Statewide Importance	0.23/0.57	10.00/24.70	2.3	Pasture (dry)
302-220-011 [a]	Statewide Importance	0.25/0.61	10.00/24.71	2.5	Pasture (dry)
302-210-019	Statewide Importance	0.42/1.05	4.51/11.15	9.3	Pasture (dry)

Affected Parcel Number [a]	**Type of Farmland**	**Right-of-Way for Route 65 (hectares/ acres)**	**Total Parcel Size (hectares/ acres)**	**Percent of Parcel Affected**	**Present Parcel Use**
302-180-033 [a]	Prime and Statewide Importance	0.22/0.54	9.99/24.68	2.2	Pasture (dry)
302-180-034 [a]	Statewide Importance	0.21/0.52	9.99/24.69	2.1	Pasture (dry)
302-180-042	Prime and Statewide Importance	0.31/0.76	8.94/22.10	3.5	Citrus
302-162-018 [a]	Prime and Statewide Importance	0.87/2.15	15.66/38.69	5.6	Pasture (dry)
302-125-007	Statewide Importance	0.66/1.62	7.94/19.63	8.3	Pasture (dry)
302-125-008 [a]	Prime and Statewide Importance	0.63/1.56	7.94/19.62	7.9	Citrus
302-122-012	Statewide Importance	0.60/1.49	15.91/39.31	3.8	Citrus
302-122-018	Statewide Importance	0.65/1.60	7.94/19.63	8.2	Citrus
268-130-023	Statewide Importance	0.24/0.59	7.56/18.67	3.2	Citrus
268-130-033	Statewide Importance	0.50/1.24	10.13/25.04	4.9	Citrus
268-120-020	Statewide Importance	1.22/3.02	32.41/80.09	3.8	Olive
268-110-006	Statewide Importance	0.47/1.15	16.19/40.00	2.9	Pasture (dry)
268-110-016	Statewide Importance	0.56/1.38	16.14/39.89	3.5	Citrus
268-040-003	Local Importance	0.21/0.52	6.18/15.26	3.4	Vacant
268-040-007	Local Importance	0.15/0.38	2.29/5.66	6.7	Vacant
TOTAL		66.48/ 164.28	2148.34/ 5308.75	3.1	87 parcels

[a] Williamson Act Parcel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State Hwy 190
Scranton
Avenue 128
Avenue 124
Avenue 120
State Hwy 65
Avenue 112
Avenue 104
Terra Bella
Avenue 96
Avenue 88
Urban Development Boundaries
Urban Area Boundaries
Parcels
Farmland
Prime Farmland
Farmland of Statewide Importance
Unique Farmland
Farmland of Local Importance
Grazing Land
Urban and Built-Up Land
Other Land
Water
Farmland of Local Potential
Irrigated Farmland
Nonirrigated Farmland
Not Surveyed
Prime Farmland
State Hwy 65
Hwy 190 to County Line
(Not Official Map)
(Sheet 1 of 3)
N
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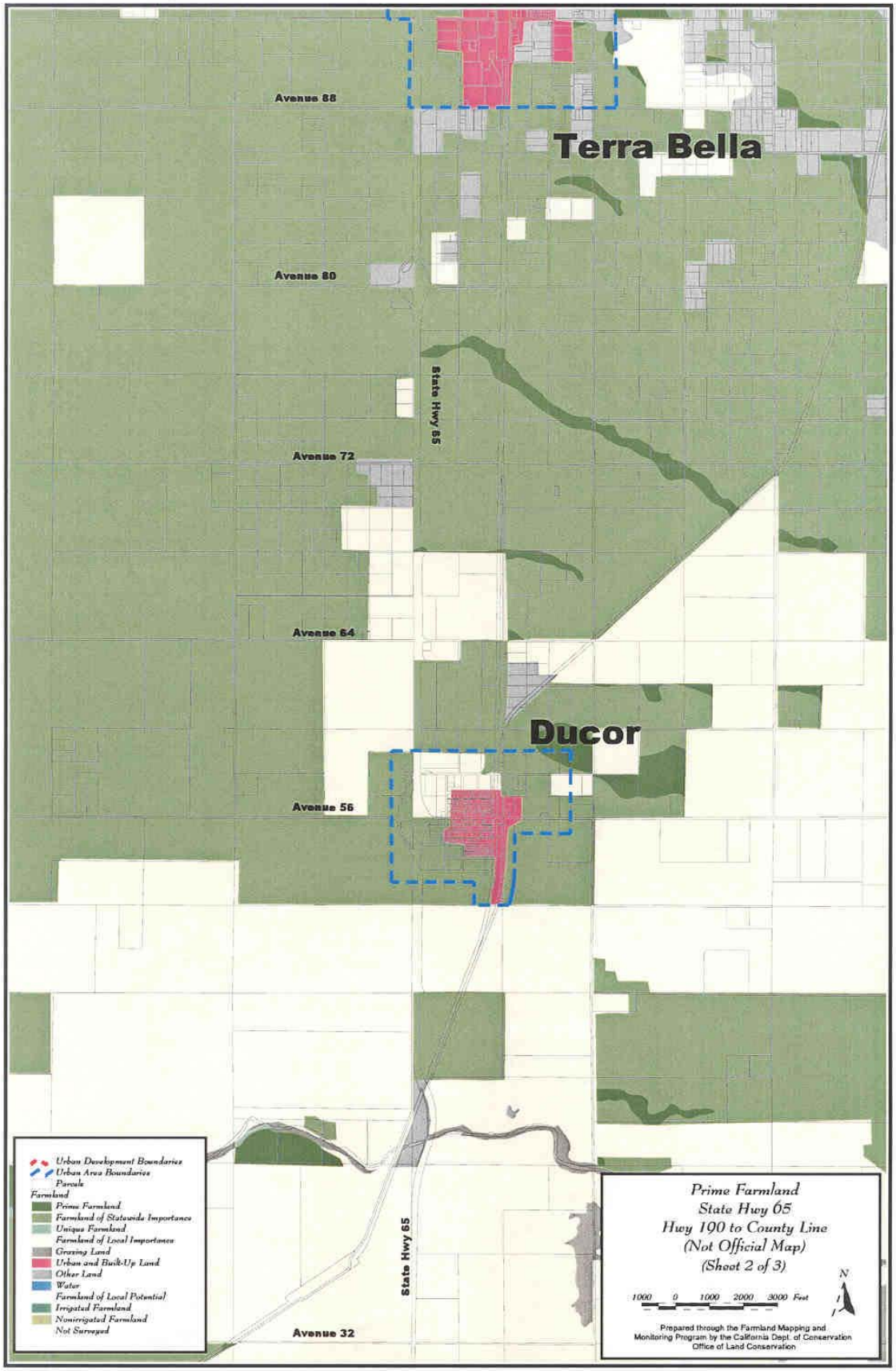
Prepared through the Farmland Mapping and Monitoring Program by the California Dept. of Conservation Office of Land Conservation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Terra Bella
Avenue 80
State Hwy 65
Avenue 72
Avenue 64
Ducor
Avenue 56
State Hwy 65
Avenue 32
Urban Development Boundaries
Urban Area Boundaries
Parcels
Farmland
Prime Farmland
Farmland of Statewide Importance
Unique Farmland
Farmland of Local Importance
Grazing Land
Urban and Built-Up Land
Other Land
Water
Farmland of Local Potential
Irrigated Farmland
Nonirrigated Farmland
Not Surveyed
Prime Farmland
State Hwy 65
Hwy 190 to County Line
(Not Official Map)
(Sheet 2 of 3)
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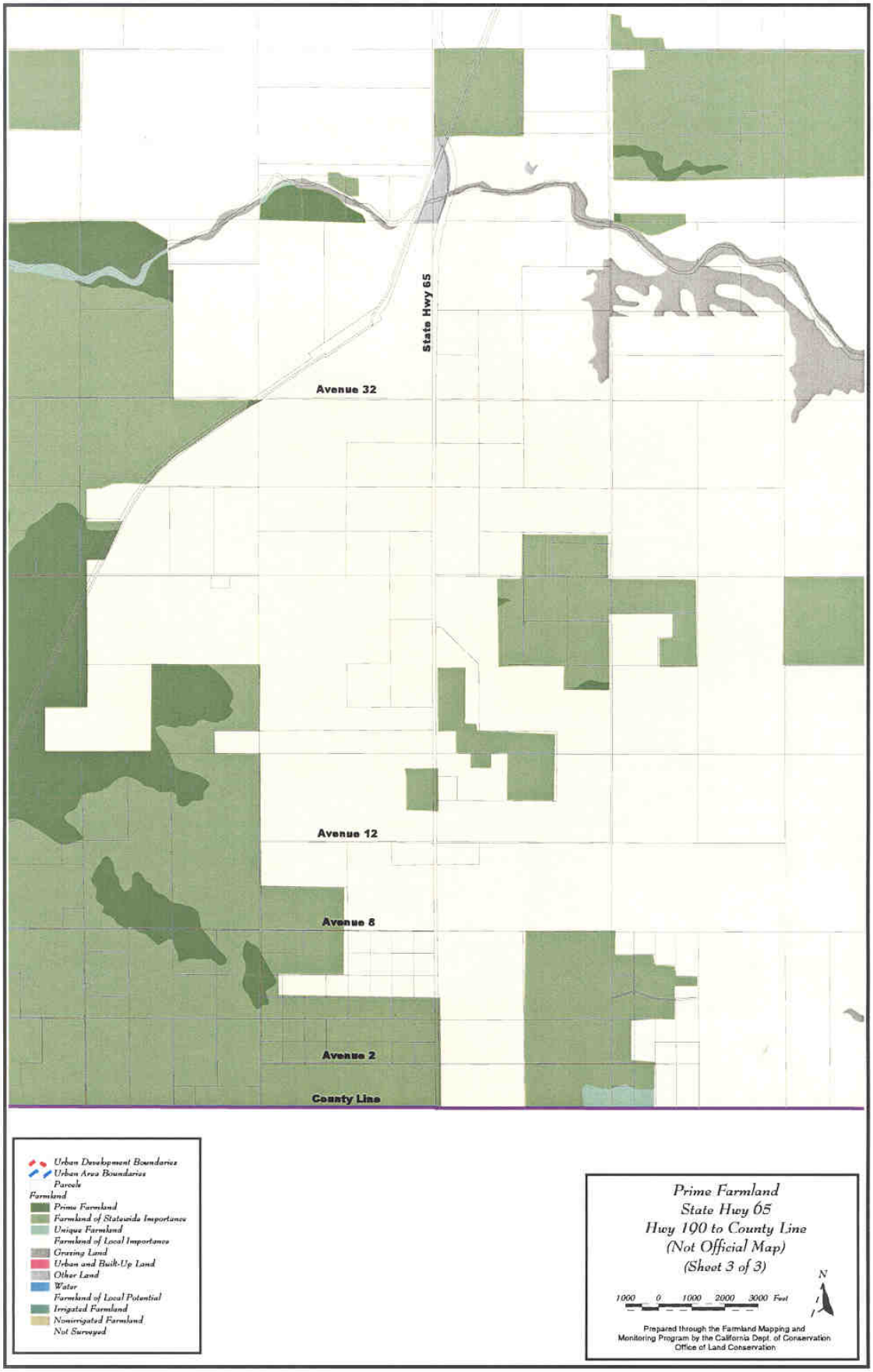
N
Prepared through the Farmland Mapping and
Monitoring Program by the California Dept. of Conservation
Office of Land Conservation


State Hwy 65
Avenue 32
Avenue 12
Avenue 8
Avenue 2
County Line
Urban Development Boundaries
Urban Area Boundaries
Parcels
Farmland
Prime Farmland
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Unique Farmland
Farmland of Local Importance
Grazing Land
Urban and Built-Up Land
Other Land
Water
Farmland of Local Potential
Irrigated Farmland
Nonirrigated Farmland
Not Surveyed
Prime Farmland
State Hwy 65
Hwy 190 to County Line
(Not Official Map)
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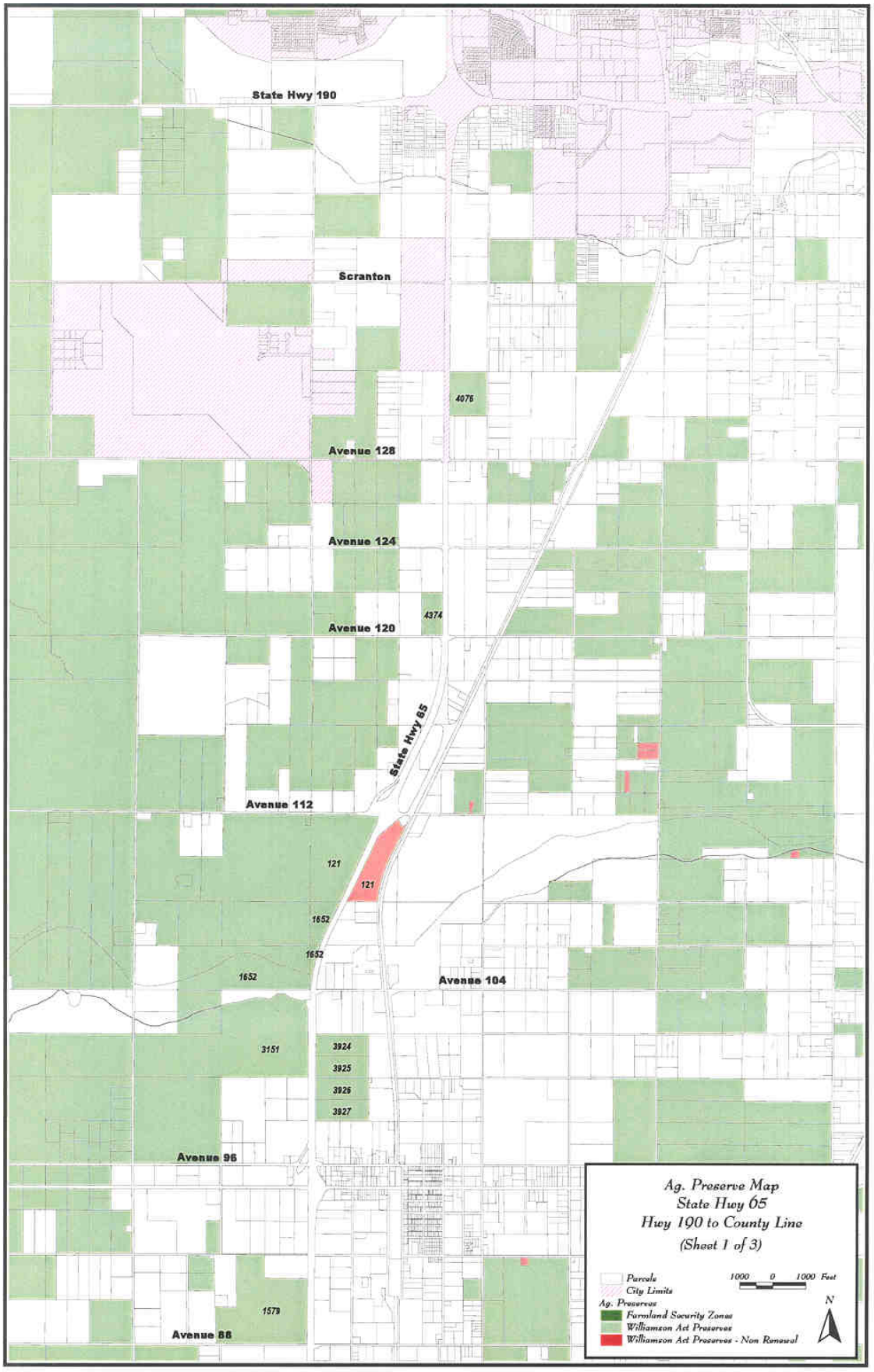
Prepared through the Farmland Mapping and Monitoring Program by the California Dept. of Conservation Office of Land Conservation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Avenue 128
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Avenue 120
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State Hwy 65
Avenue 112
121
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1652
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1652
Avenue 104
3151
3924
3925
3926
3927
Avenue 96
1579
Avenue 88
Ag. Preserve Map
State Hwy 65
Hwy 190 to County Line
(Sheet 1 of 3)
Parcels
City Limits
Ag. Preserves
Farmland Security Zones
Williamson Act Preserves
Williamson Act Preserves - Non Renewal
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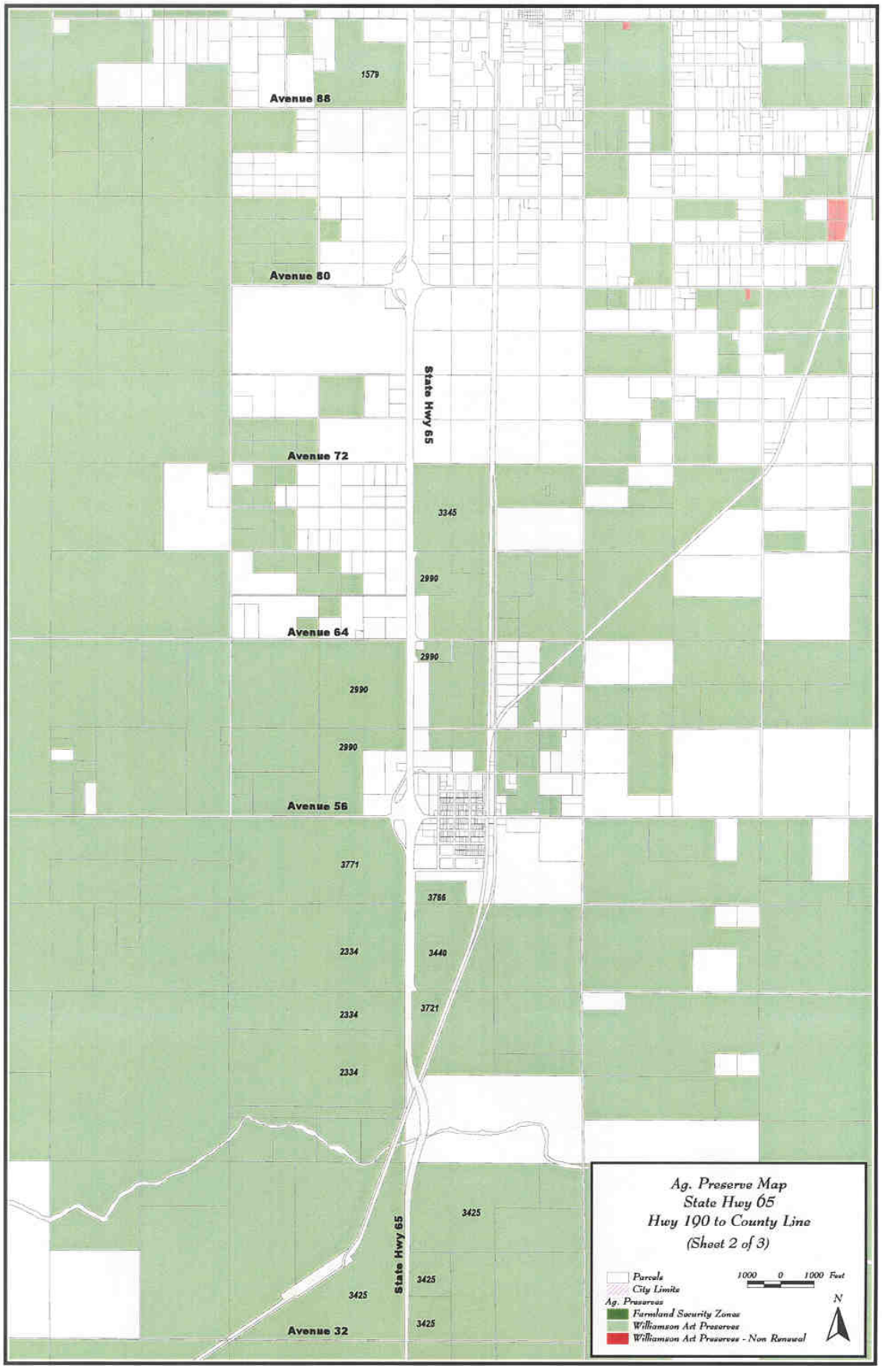
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Avenue 56
Avenue 32
State Hwy 65
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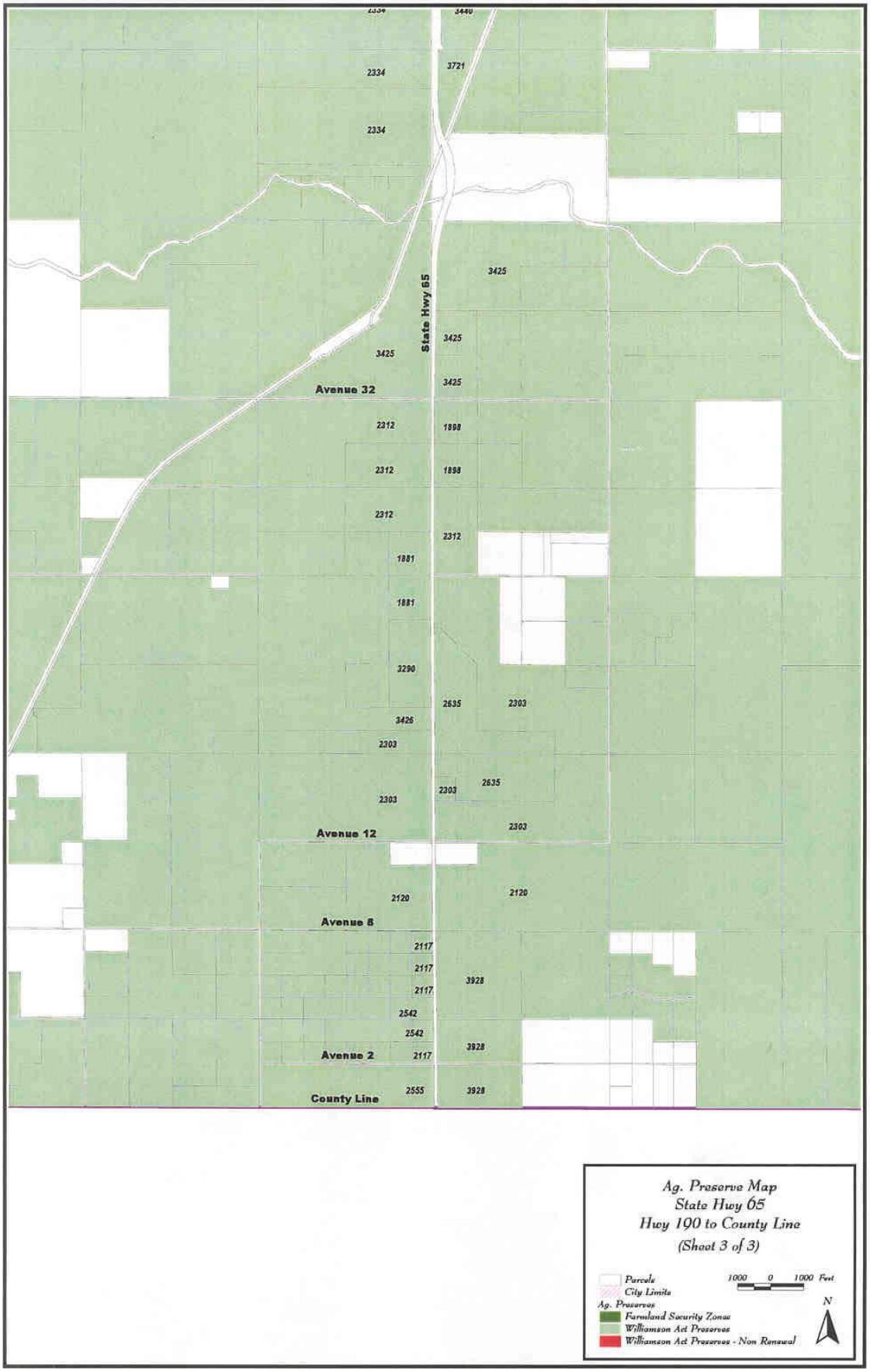
3345
2990
2990
2990
2990
3771
3766
2334
3440
2334
3721
2334
3425
3425
3425
3425
Ag. Preserve Map
State Hwy 65
Hwy 190 to County Line
(Sheet 2 of 3)
Parcels
City Limits
Ag. Preserves
Farmland Security Zones
Williamson Act Preserves
Williamson Act Preserves - Non Renewal
1000 0 1000 Feet
N


State Hwy 65
Avenue 32
Avenue 12
Avenue 8
Avenue 2
County Line
Ag. Preserve Map
State Hwy 65
Hwy 190 to County Line
(Sheet 3 of 3)
Parcels
City Limits
Ag. Preserves
Farmland Security Zones
Williamson Act Preserves
Williamson Act Preserves - Non Renewal
1000 0 1000 Feet
N

Appendix E Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

RELOCATION ASSISTANCE ADVISORY SERVICES

The California Department of Transportation (Caltrans) will provide relocation advisory assistance to any person, business, farm, or non-profit organization displaced as a result of Caltrans acquisition of real property for public use. Caltrans will assist displacees (displaced residents) in obtaining comparable, decent, safe and sanitary replacement housing by providing current and continuing information on sales price and rental rates of available housing. Non-residential displacees will receive information on comparable properties for lease or purchase.

Residential replacement dwellings will be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displacees will be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include supplying information concerning federal and state assisted housing programs, and any other known services being offered by public and private agencies in the area.

RESIDENTIAL RELOCATION PAYMENTS PROGRAM

The Relocation Payment Program will assist eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for, or incidental to, purchasing or renting a replacement dwelling, and actual reasonable expenses incurred in moving to a new location within 80 kilometers (50 miles) of displacee's property. Any actual moving costs in excess of 80 kilometers (50 miles) are the responsibility of the displacee. The Residential Relocation Program can be summarized as follows:

Moving Costs

Any displaced person lawfully in occupancy of the acquired property, regardless of the length of occupancy in the acquired property, will be eligible for reimbursement

of moving costs. Displacees will be eligible to receive one of the following: (1) actual reasonable costs involved in moving themselves and personal property up to a maximum of 80 kilometers (50 miles); (2) a moving service authorization; (3) or a fixed payment based on a fixed moving cost schedule determined by the number of furnished or unfurnished rooms of the displacement dwelling.

Purchase Supplement

In addition to moving and related expenses payments, fully eligible homeowners may be entitled to payments for increased costs of purchasing replacement housing. Homeowners who have owned and occupied their property for 180 days prior to the date of the first written offer to purchase the property may qualify to receive a price differential payment equal to the difference between Caltrans' offer to purchase their property and the price of a comparable replacement dwelling. In addition, homeowners may also qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property.

An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. Also the interest differential must be based upon the "lesser of" either the loan on the displacement property or the loan on the replacement property. The maximum combination of these three supplemental payments that the owner-occupants can receive is $22,500. If the calculated total entitlement (without the moving payments) is in excess of $22,500, the displacee may qualify for the Last Resort Housing described below.

Rental Supplement

Tenants who have occupied the property to be acquired by Caltrans for 90 days or more, and owner-occupants who have occupied the property 90 to 180 days prior to the date of the first written offer to purchase, may qualify to receive a rental differential payment. This payment is made when Caltrans determines that the cost to rent a comparable and "decent, safe, and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the eligible occupant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitation noted below under the "down payment" section (see below). The maximum amount of payment to any tenant of 90 days or more and any

owner-occupant of 90 to 170 days, in addition to moving expenses, will be $5,250. If the calculated total entitlement for rental supplement exceeds $5,250, the displacee may qualify for the Last Resort Housing Program described below.

The rental supplement of $7,500 or less will be paid in a lump sum, unless the displacee requests that it be paid in installments. The displaced person must rent and occupy a "decent, safe and sanitary" replacement dwelling within one year from the date Caltrans takes legal possession of the property, or from the date the displacee vacates the Caltrans-acquired property, whichever is later.

Down Payment

Displacees eligible to receive a rental differential payment may elect to apply it to a down payment for the purchase of a comparable replacement dwelling. The down payment and incidental expenses cannot exceed the maximum payment of $5,250, unless the Last Resort Housing Program is indicated. The one-year eligibility period in which to purchase and occupy a "decent, safe and sanitary" replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 Code of Federal Regulations 24.404) contain the policy and procedure for implementing the Last Resort Housing Program on federal aid projects. In order to maintain uniformity in the program, Caltrans has also adopted these federal guidelines on non-federal-aid projects. Except for the amounts of payments and the methods in making them, last resort housing benefits are the same as those benefits for standard relocation as explained above. Lost resort housing has been designed primarily to cover situations where available comparable replacement housing, or when their anticipated replacement housing payments, exceed the $2,520 and $22,500 limits of the standard relocation procedures. In certain exceptional situations, last resort housing may also be used for tenants of less than 90 days. After the first written offer to acquire the property has been made, Caltrans will, within a reasonable length of time, personally contact the displacees to gather important information relating to:

- Preferences in area of relocation.
- Number of people to be displaced and the distribution of adults and children according to age and sex.
- Location of school and employment.
- Special arrangements to accommodate any handicapped member of the family.

- Financial ability to relocate into comparable replacement dwelling, which will house all members of the family decently.

The above explanation is general in nature and is not intended to be a complete explanation of relocation regulations. Any questions concerning relocation should be addressed to the Department. Any persons to be displaced will be assigned a relocation advisor who will work closely with each displacee in order to see that all payments and benefits are fully utilized, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of the benefits or payments.

THE BUSINESS AND FARM RELOCATION ASSISTANCE PROGRAM

The Business and Farm Relocation Assistance Program provides aid in locating suitable replacement property for the displacee's farm or business, including when requested, a current list of properties offered for sale or rent. In addition, certain types of payments are available to businesses, farms, and non-profit organizations. These payments may be summarized as follows:

- Reimbursement for the actual direct loss of tangible personal property incurred as a result of moving or discontinuing the business in an amount not greater than the reasonable cost of relocating the property.
- Reimbursement up to $1,000 of actual reasonable expenses in searching for a new business site.
- Reimbursement up to $10,000 of actual reasonable expenses related to the reestablishment of the business at the new location.
- Reimbursement of the actual reasonable cost of moving inventory, machinery, office equipment and similar business-related personal property, including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting personal property.

Payment "in lieu" of moving expense is available to businesses which are expected to suffer a substantial loss of existing patronage as a result of the displacement, or if certain other requirements such as inability to find a suitable relocation site are met. This payment is an amount equal to the average annual net earnings for the last two taxable years prior to relocation. Such payment may not be less than $1,000 and not more than $20,000.

ADDITIONAL INFORMATION

No relocation payment received will be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments will not be required to move unless at least one comparable "decent, safe and sanitary" replacement residence, open to all persons regardless of race, color, religion, sex or national origin, is available or has been made available to them by the state.

Any person, business, farm or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or the Caltrans Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal council at his/her expense. Information about the appeal procedure is available from Caltrans' Relocation Advisors.

The information above is not intended to be a complete statement of all of the Department's laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of the Department's relocation programs.

IMPORTANT NOTICE

To avoid loss of possible benefits, no individual, family, business, farm or non-profit organization should commit to purchase or rent a replacement property without first contacting a Department of Transportation relocation advisor at:

State of California
Department of Transportation, District 06
Relocation Assistance Program
Tower Building, 855 M St, 3rd Floor
Fresno, CA 93721

Appendix F Floodplain Evaluations Report Summary

FLOOD PLAIN EVALUATIONS REPORT SUMMARY

Dist. 06 Co. TUL Rte. 65 P.M. 0.0/18.0
Project No: EA 06-434000 Bridge No. 46-210 & 46-213

Limit:

Floodplain Description: The majority of the project traverses a "Zone C". "Zone C" Is defined as Areas of minimal flooding. Highway 65 makes a several "Zone A" crossings however. "Zone A" is defined as an area of 100-year flood; base flood elevations and flood hazard factors not determined. This information is on FIRM maps 065066 1250 B, 065066 1035 B, 065066 1045 B, and 060407 0010 D.

		YES	NO
1.	Is the proposed action a longitudinal encroachment of a floodplain?	___	X
2.	Are the risks associated with the implementation of the proposed action significant?	___	X
3.	Will the proposed action support probable incompatible floodplain development?	___	X
4.	Are there any significant impacts on the natural and beneficial floodplain values?	___	X
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain value? If yes, explain.	___	X
6.	Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q)?	___	X
7.	Are Location Hydraulic Studies that document the above answers on file? If not explain.	X	___

PREPARED BY:

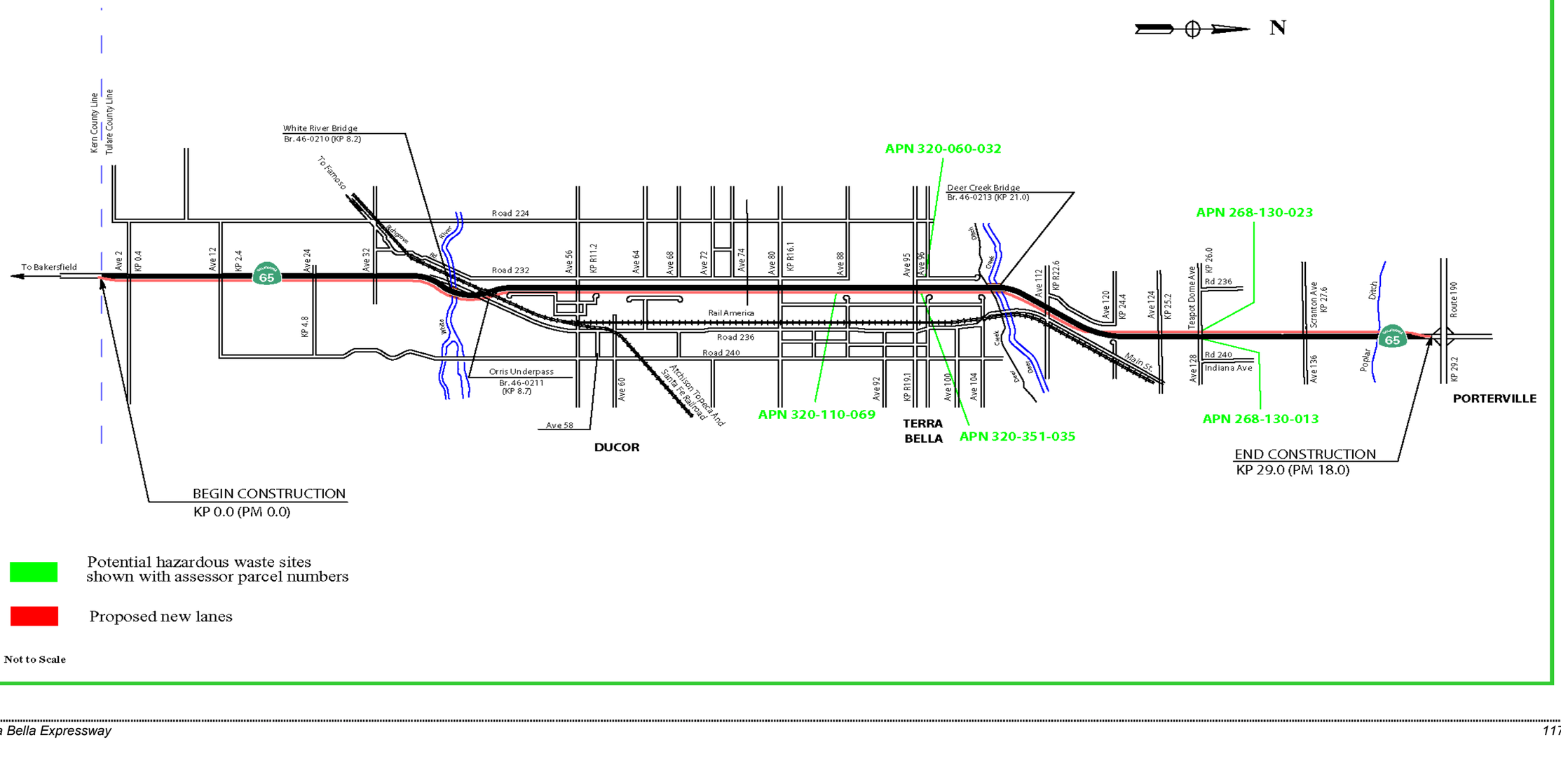
District Hydraulic Engineer — Date: 3/13/03

District Environmental Branch Chief — Date: 7/30/03

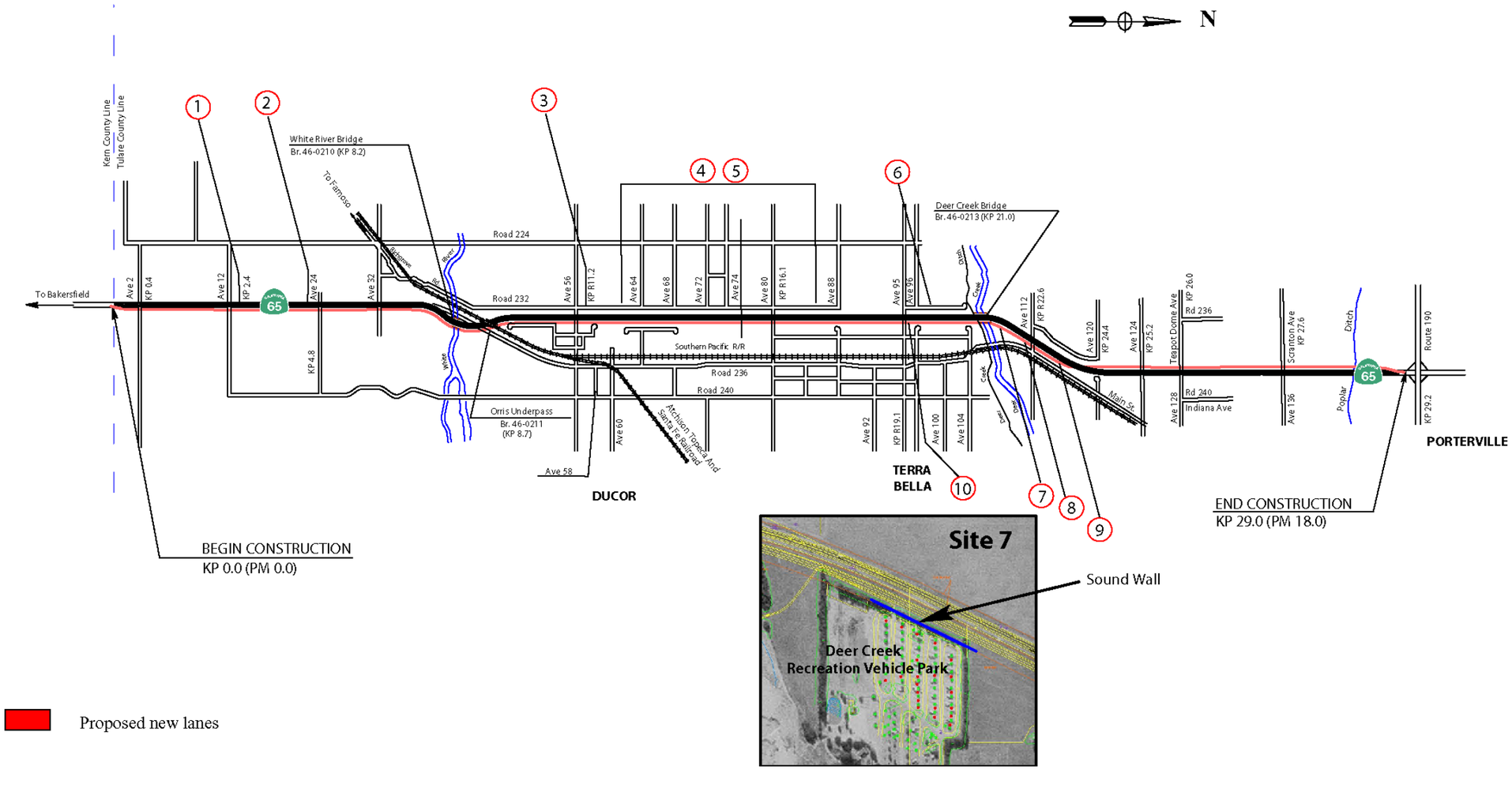
District Project Engineer — Date: 7-30-03

I CONCUR:

FHWA — Date: 8/4/03


N
Kern County Line
Tulare County Line
White River Bridge
Br. 46-0210 (KP 8.2)
To Famoso
Road 224
Road 232
Road 236
Road 240
Rail America
Deer Creek Bridge
Br. 46-0213 (KP 21.0)
APN 320-060-032
APN 268-130-023
APN 320-110-069
APN 320-351-035
APN 268-130-013
Orris Underpass
Br. 46-0211
(KP 8.7)
Atchison Topeka And Santa Fe Railroad
To Bakersfield
65
Ave 2
KP 0.4
Ave 12
KP 2.4
Ave 24
KP 4.8
Ave 32
Ave 56
KP R11.2
Ave 64
Ave 68
Ave 72
Ave 74
Ave 80
KP R16.1
Ave 88
Ave 95
Ave 96
Ave 112
KP R22.6
Ave 120
KP 24.4
Ave 124
KP 25.2
Teapot Dome Ave
KP 26.0
Rd 236
Rd 240
Indiana Ave
Ave 128
Scranton Ave
KP 27.6
Ave 136
Poplar
Ditch
Route 190
KP 29.2
Ave 58
Ave 60
Ave 92
KP R19.1
Ave 100
Ave 104
DUCOR
TERRA BELLA
PORTERVILLE
Main St
BEGIN CONSTRUCTION
KP 0.0 (PM 0.0)
END CONSTRUCTION
KP 29.0 (PM 18.0)
Potential hazardous waste sites shown with assessor parcel numbers
Proposed new lanes
Not to Scale

Appendix H Noise Receptor Locations



Appendix I Special-Status Species

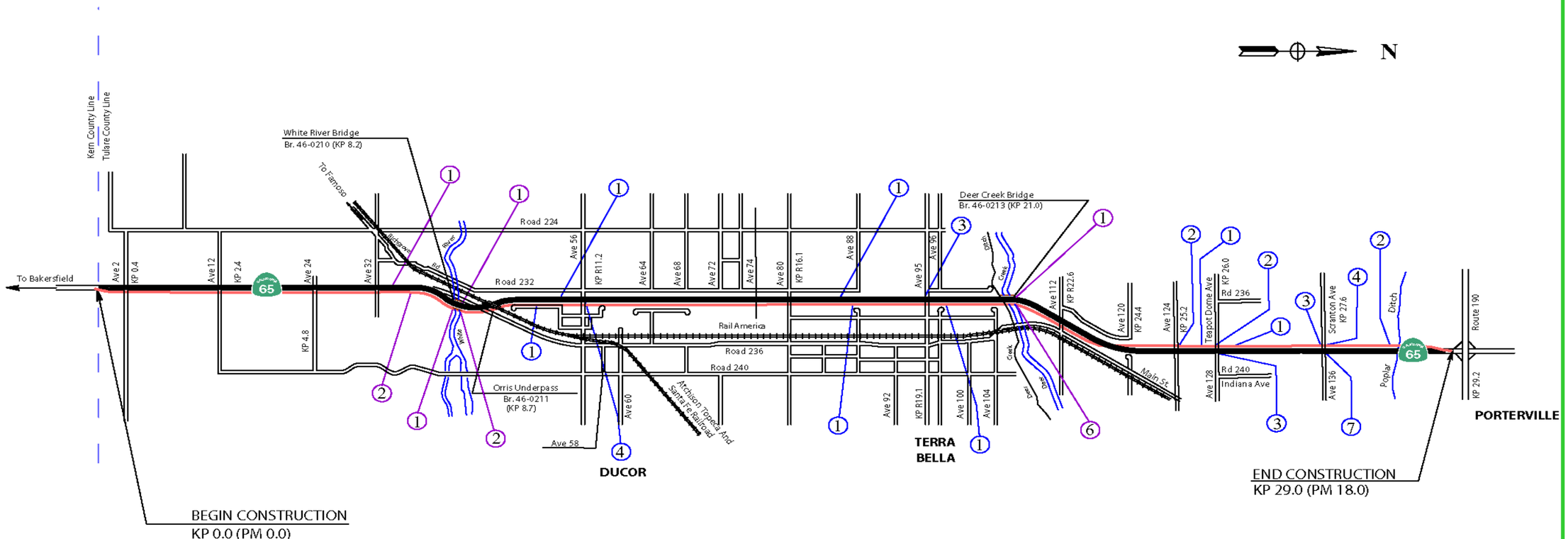
Common Name	Scientific Name	Status Federal/State	Effect Determination
Mammals			
San Joaquin kit fox	*Vulpes macrotis mutica*	FE/ST	Likely to Adversely Affect
San Joaquin antelope squirrel	*Ammospermophilus nelsoni*	FSC/ST	No Effect
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	FE/SE	No Effect
San Joaquin pocket mouse	*Perognathus inornatus inornatus*	FSC	No Effect
Tulare grasshopper mouse	*Onychomys torridus tularensis*	FSC/SC*	No Effect
Southern grasshopper mouse	*Onychomys torridus ramona*	FSC/SC*	No Effect
Yuma myotis bat	*Myotis yumanensis*	FSC/SC*	No Effect
Fringed myotis bat	*Myotis thysanodes*	FSC	No Effect
Long-eared myotis bat	*Myotis evotis*	FSC	No Effect
Small-footed myotis bat	*Myotis ciliolabrum*	FSC	No Effect
Spotted bat	*Euderma maculatum*	FSC/SC*	No Effect
Pacific western big-eared bat	*Corynorhinus (=Plecotus) townsendii townsendii*	FSC/SC*	No Effect
Greater western mastiff-bat	*Eumops perotis californicus*	FSC/SC*	No Effect
Birds			
Tricolored blackbird	*Agelaius tricolor*	FSC/SC*	No Effect
Western burrowing owl	*Athene cunicularia hypugea*	FSC/SC*	No Effect
Ferruginous hawk	*Buteo regalis*	FSC/SC*	No Effect
Little willow flycatcher	*Empidonax traillii brewsteri*	FSC	No Effect
White–faced ibis	*Plegadis chihi*	FSC/SC*	No Effect
Lewis' woodpecker	*Melanerpes lewis*	FSC	No Effect
American Peregrine falcon	*Falco peregrinus anatum*	FD/SE, SFP	No Effect
White-tailed (=black-shouldered) kite	*Elanus leucurus*	FSC/SFP	No Effect
Costa's hummingbird	*Calypte costae*	FSC	No Effect
Rufous hummingbird	*Selasphorus rufus*	FSC	No Effect
Black swift	*Cypseloides niger*	FSC/SC*	No Effect
Vaux's swift	*Chaetura vauxi*	FSC/SC*	No Effect
Greater sandhill crane	*Grus canadensis tabida*	ST, SFP	No Effect
Swainson's hawk	*Buteo swainsoni*	ST	No Effect
Lawrence's goldfinch	*Carduelis lawrencei*	FSC	No Effect

Prairie falcon	*Falco mexicanus*	FSC	No Effect
Long-billed curlew	*Numenius americanus*	FSC	No Effect
Nuttall's woodpecker	*Picoides nuttallii*	FSLC	No Effect
Aleutian Canada goose	*Branta canadensis leucopareia*	FD	No Effect
Bald eagle	*Haliaeetus leucocephalus*	FT (FPD)/SE, SFP	No Effect
California condor **Critical Habitat**	*Gymnogyps californianus*	FE/SE, SFP	No Effect
Loggerhead shrike	*Lanius ludovicianus*	FSC/SC*	May Effect/Not likely to trend toward listing
Reptiles			
Northwestern pond turtle	*Clemmys marmorata marmorata*	FSC/SC*, SP	No Effect
Southwestern pond turtle	*Clemmys marmorata pallida*	FSC/SC*, SP	No Effect
San Joaquin coachwhip (=whipsnake)	*Masticophis flagellum ruddocki*	FSC/SC*, SP	No Effect
California horned lizard	*Phrynosoma coronatum frontale*	FSC/SC*, SP	No Effect
Blunt-nosed leopard lizard	*Gambelia sila*	FE/SE, SFP	No Effect
Silvery legless lizard	*Anniella pulchra pulchra*	FSC/SC*	No Effect
Giant garter snake	*Thamnophis gigas*	FT/ST, SP	No Effect
Amphibians			
California red-legged frog	*Rana aurora draytonii*	FT/SC*, SP	No Effect
Foothill yellow-legged frog	*Rana boylii*	SC/SC*	No Effect
Western spadefoot	*Spea hammondii*	SC/SC*, SP	No Effect
Fish			
Longfin smelt	*Spirinchus thaleichthys*	FSC/SC*	No Effect
Delta smelt	*Hypomesus transpacificus*	FT/ST	No Effect
Kern Brook lamprey	*Lampetra hubbsi*	FSC/SC*	No Effect
Little Kern golden trout Critical Habitat	*Oncorhynchus (=Salmo) aquabonita whitei*	FT	No Effect
Sacramento splittail	*Pogonichthys macrolepidotus*	FD/SC*	No Effect
Invertebrates			
California linderiella	*Linderiella occidentalis*	FSC	No Effect
Molestan blister beetle	*Lytta molesta*	FSC	No Effect
Hopping's blister beetle	*Lytta hoppingi*	FSC	No Effect
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Likely to Adversely Affect.
Critical habitat Vernal pool fairy shrimp			No Critical Habitat within the Biological Study Area
San Joaquin tiger beetle	*Cicindela tranquebarica ssp.*	FSC	No Effect
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	Likely to Adversely Affect

Plants			
California jewelflower	*Caulanthus californicus*	FE/SE	No Effect
Spiny-sepaled button-celery	*Eryngium spinosepalum*	FSC	No Effect
Recurved larkspur	*Delphinium recurvatum*	FSC	No Effect
Greenhorn adobe-lily	*Fritillaria striata*	FSC/ST	No Effect
Keck's checker-mallow (=checkerbloom)	*Sidalcea keckii*	FE	No Effect
Critical Habitat Keck's checker-mallow			No effect
Calico monkeyflower	*Mimulus pictus*	FSC	No Effect
Heartscale	*Atriplex cordulata*	FSC	No Effect
Madera linanthus	*Linanthus serrulatus*	FSC	No Effect
Subtle orache	*Atriplex subtilis*	FSC	No Effect
Vernal pool smallscale	*Atriplex persistens*	FSC	No Effect
San Joaquin adobe sunburst	*Pseudobahia peirsonii*	FT/SE	No Effect

Status Definitions: FE-Federal Endangered, FT-Federal Threatened, FSC-Federal Species of Concern, FD-Federal Delisted, FPD-Federal Proposed for Delisting, FSLC-Federal Species of Local Concern, SE-State Endangered, ST-State Threatened, SC*-State Division of Fish and Game Special Concern Species, SFP-State Fully Protected, SP-State Protected

Location of Biology Resources



Appendix J Minimization and/or Mitigation Summary

Relocations

Any person (individual, family, corporation, partnership, or association) who moves from real property or moves personal property from real property as a result of the acquisition of the real property, or is required to relocate as a result of a written notice from the California Department of Transportation from the real property required for a transportation project is eligible for "Relocation Assistance." All activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (see Appendices B and E).

Visual

The cut and fill slopes would be rounded to naturalize their appearance. Caltrans landscape architecture and biology branches would determine the species and number of replacement trees. Native trees would be replaced. Colorful plants would soften the visual impacts to the newly constructed highway. Seed mixes would, as closely as possible, resemble and blend with existing vegetation, maintaining visual unity. All disturbed areas would receive erosion control and storm water runoff control measures.

Landscape treatments will be incorporated to reduce the negative visual impacts associated with soundwalls. Soundwalls should be located in a manner that is least intrusive and minimizes visual impact. Architectural treatments, such as color and/or textures should reduce glare and relate to other structures within the region. In addition, highway planting and irrigation shall be provided along the soundwall in accordance with Caltrans policy.

Water Quality

Since this pollution source is considered a non-point source, management measures and best management practices will need to be addressed during planning, design, construction, operation and maintenance stages.

- A Storm Water Pollution Prevention Plan would be implemented during construction, to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges. The plan would also describe and ensure the implementation of best management practices to reduce or eliminate

sediment and other pollutants in storm water as well as non-storm water discharges.

Paleontology

Because a possibility exists that fossils would be encountered during the excavation phase of road construction, paleontological monitoring and mitigation such as the preparation of a detailed mitigation plan, recovery of fossil remains in a timely manner and cataloging of fossil remains are recommended.

Hazardous Waste

Steps would be taken to reduce or eliminate any airborne dust. Water should be available at all times to moisten the soil in work areas where activities could potentially stir up aerially deposited lead.

Prior to any excavation or other soil disturbance, appropriate health and safety measures, such as a project specific Lead Compliance Plan must be developed and implemented to prevent or minimize lead exposure to employees and the public. Coordination of any permits is needed.

The demolition of water wells within the project limits must be in accordance with standards prepared by the Department of Water Resources (Bulletins 74-90) Title 23, California Code of Regulations and local regulatory standards.

Noise

Sound walls would be built at the Deer Creek Recreational Vehicle Park. The sound wall would be 4.3-meters (14-feet) high and 56-meters (183-feet) long, along the right-of-way line. The size and location are approximations based on current drawings and elevation information.

Wetlands and Other Waters

Approximately 0.003 hectare (0.006 acre) of fill material (concrete piles) will be placed below the ordinary high water mark for both jurisdictional waters. This minimal impact would require a non-reporting Nationwide Number 14 Permit from the Army Corps of Engineers and no compensatory mitigation would be necessary. In addition, a Streambed Alteration Agreement pursuant to the California Department of Fish and Game code 1600 et. sec. would be required and compensatory mitigation would likely include establishment of native vegetation along the channel banks, thereby improving the overall quality of both riparian areas.

Special Concern Species

Pre-construction surveys in appropriate habitats would be conducted to identify the presence of any listed threatened and endangered species or important habitat for listed species. Designated staging areas for equipment storage, vehicle parking, and other project related activities within the biological study area would be pre-approved by a Caltrans regional biologist.

San Joaquin Kit Fox

Caltrans would (1) conduct pre-construction surveys prior to ground disturbance to search for San Joaquin kit fox dens within the impact area; (2) conduct a meeting and training on the San Joaquin kit fox for construction personnel prior to groundbreaking activities; (3) adhere to Contract Special Provisions during construction; and (4) conduct construction activities during daytime hours to avoid potential disruption of San Joaquin kit fox nocturnal activities.

Caltrans proposes to mitigate, through land acquisition, for the permanent loss of 132 hectares (325 acres) of San Joaquin kit fox foraging habitat at a 1.1 to 1 ratio and the temporary loss of 81 hectares (200 acres) at a 0.5 to 1 ratio. Accordingly the total acreage to be acquired at a U. S. Fish and Wildlife Service approved site would be 185 hectares (458 acres).

Valley Elderberry Longhorn Beetle

Caltrans proposes to mitigate for the permanent loss of 12 elderberry shrubs for the Valley Elderberry Longhorn Beetle. A 0.5-hectare (1.2-acre) site would be necessary for 12 transplanted shrubs, 130 replacement elderberry, and 138 native plant seedlings.

Proposed mitigation of additional elderberry stems that may grow on the 12 elderberry shrubs before construction begins includes up to 42 replacement elderberry and 42 additional native plant seedlings to be planted on 0.2 hectare (0.4 acre).

Vernal Pool Fairy Shrimp

Two disturbed seasonal pools and three roadside puddles would be designated as environmentally sensitive areas to be avoided during construction activities. These protected areas would be enclosed within a temporary fence.

Caltrans proposes to mitigate for the permanent loss of 0.3 hectare (0.7 acre) of vernal pool fairy shrimp habitat in accordance with the programmatic agreement for projects

with relatively small effects on listed vernal pool crustaceans. Credits equivalent to 0.8 hectare (2.1 acres) would be purchased.

Invasive Species

Precautions to prevent the spread of invasive species must occur during construction. Plant material removed from the construction zone containing invasive species must be disposed of properly. Mulch or planting materials used must be classified as "weed free." All vehicles driving in areas where invasive plants are found must be washed and cleaned thoroughly to avoid spread of seeds by tires.

In addition, the following *Special Provisions* will be implemented before and/or during construction of this project and are available for review at: California Department of Transportation, 1352 W. Olive Avenue, Fresno, CA:

- *Archaeology Special Provisions* in regards to the discovery of artifacts and/or human remains during construction.
- *General Migratory Bird Treaty Act Special Provisions* in regards to the protection of migratory birds, their occupied nests, and their eggs from disturbance or destruction.
- *Swallow Contract Provisions* in regards to the avoidance of conflicts between performing necessary work and nesting swallows.
- *Environmentally Sensitive Area Special Provisions* in regards to the protection of sensitive areas.
- *San Joaquin Kit Fox Protection Special Provisions* in regards to the avoidance of a "take" as defined by law.

Appendix K Glossary of Technical Terms

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
dBA	Level of sound pressure measured in decibels expressed in A-weighted decibels (to approximate the way humans interpret sound).
km	Kilometer(s)
KP	Kilometer post
NEPA	National Environmental Policy Act
PM	Post mile
PPM	Parts Per Million
SWRCB-DWQ	State Water Resources Control Board - Division of Water Quality
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

Appendix L List of Technical Studies

Air Quality Report
Draft Relocation Impact Memorandum
Hazardous Waste Reports
    Initial Site Assessment
    Preliminary Site Investigation
Historical Property Survey Report
    Historic Study Report
    Historic Resource Evaluation Report
    Historic Architectural Survey Report
    Archaeological Survey Report
Initial Paleontology Study
Location Hydraulic Study
Natural Environment Study
Noise Study Report
Preliminary Geotechnical Report
Preliminary Hydraulic Report for Advance Planning Study
Scenic Resource Evaluation/Visual Assessment
Transportation Management Plan and Lane Closure Recommendations
Supplemental Safety Analysis
Updated Operational Analysis
Visual and Scenic Resources Evaluation
Water Quality Report